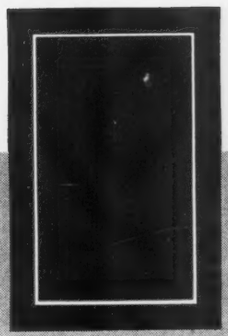
OCTOBER 1947



Engineer

Let's take a *close look* at this word-

a-vail'-able

Funk & Wagnalls* defines *available* as: *"(1) Capable of being used advantageously; usable; profitable. (2) Of adequate power for a result; effectual."*

Remember this definition the next time you are told that certain graphic arts equipment is *"available"*!

Too often the word is used loosely to denote equipment on which fairly quick delivery is exploited to the limit. After that, it becomes your problem to decide whether or not it is *"capable of being used advantageously"* or *"of adequate power for a result"*.

*Funk & Wagnalls College Standard Dictionary

In the past, temptation to take a chance—to sign up for untried and little known machinery, merely because immediate delivery was promised—we know, has been strong. Today, however, the comparatively short time remaining until the graphic arts industry can get delivery of equipment which it knows from experience to be dependable, does not justify that gamble.

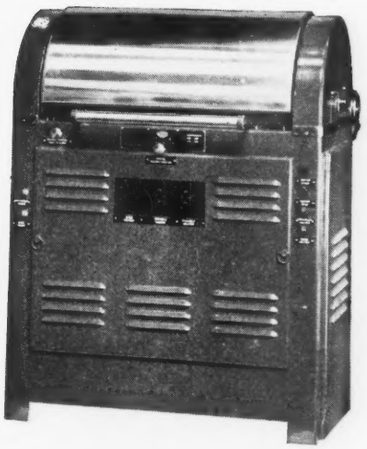
May we suggest that you discuss your needs with a Harris-Seybold representative now? In the years to come, you'll be glad you waited a bit longer for Harris Presses, Seybold Cutters and other Harris-Seybold graphic arts equipment.

HARRIS-SEYBOLD

General Offices, Cleveland 5, Ohio

HARRIS PRESSES • SEYBOLD CUTTERS
OTHER GRAPHIC ARTS EQUIPMENT

"460"



There are now 460 Sta-Hi Master Formers in operation or on order.

These orders have come from smaller city daily newspapers with circulations of only a few thousand, and from metropolitan publications operating "batteries" of six or more machines.

Day in and day out, they are helping deliver the newspapers of America on schedule, eliminating "headaches" in stereotype routine, and making possible a better-printed product.

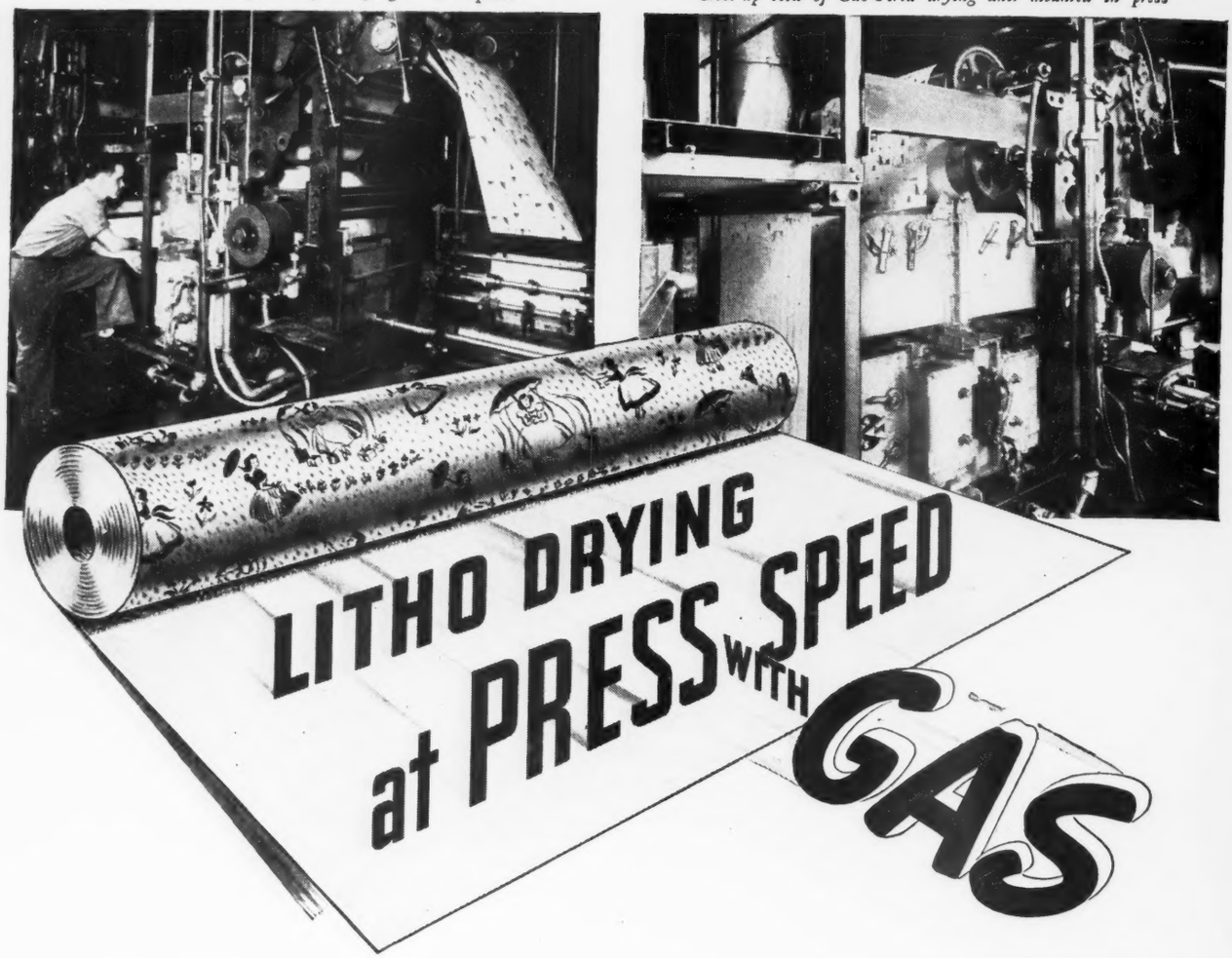
Why don't you join this parade of progressive publishers? Write us for complete details.

STA-HI

STA-HI CORPORATION • 1020 CROCKER ST. • LOS ANGELES 21

Paper is cut and folded after drying in litho-press

Close-up view of Gas-Fired drying unit mounted in press



LITHO DRYING at PRESS SPEED WITH GAS

Produces 18,000 feet of printed, dried, and packaged lithography every hour—real production-line printing.

Costs one five-hundredth cent per impression—genuine economy in lithographic ink-drying.

Increases life of plates and water-rollers—allows a nice margin for liquidating the cost of drying equipment.

Saves on space used for storage during normal ink-drying cycle, and saves by increasing "coverage" of ink—shows the profit which makes Gas-Fired Ink-Drying Equipment a good investment.

Mr. H. B. Block, President of The Emerson Press, Inc., Pittsburgh, reported these results after installing the first Selas Vapo-Lith Gas-Fired Dryer. They were good enough results to encourage the purchase of the second Selas press-speed dryer using GAS for fuel.

You will find GAS the flexible, economical, rapid-acting fuel for ink-drying, paper-curing, type-metal melting, stereotyping, and other processes requiring heat. Your local Gas Company has all the information on the latest types of Gas-Fired Equipment.

MORE AND MORE...

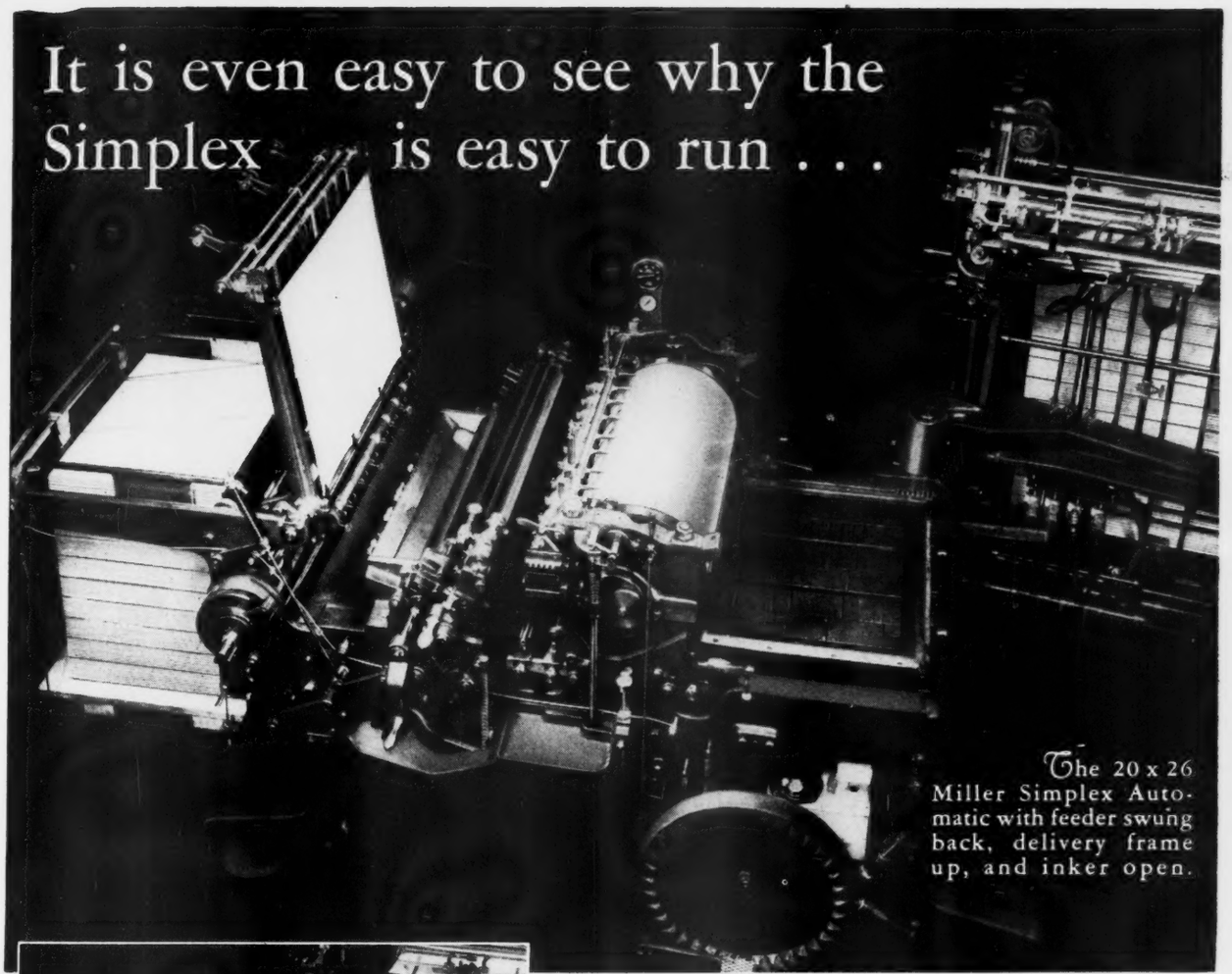
THE TREND IS TO GAS

FOR ALL INDUSTRIAL HEATING

AMERICAN GAS ASSOCIATION

420 LEXINGTON AVENUE, NEW YORK 17, N. Y.

It is even easy to see why the Simplex is easy to run . . .



The 20 x 26 Miller Simplex Automatic with feeder swung back, delivery frame up, and inker open.

A man of average height (5'-8" by insurance statistics) is a half foot taller than the very highest part of a Simplex press. He can see and reach all parts of the press with a minimum of exertion.

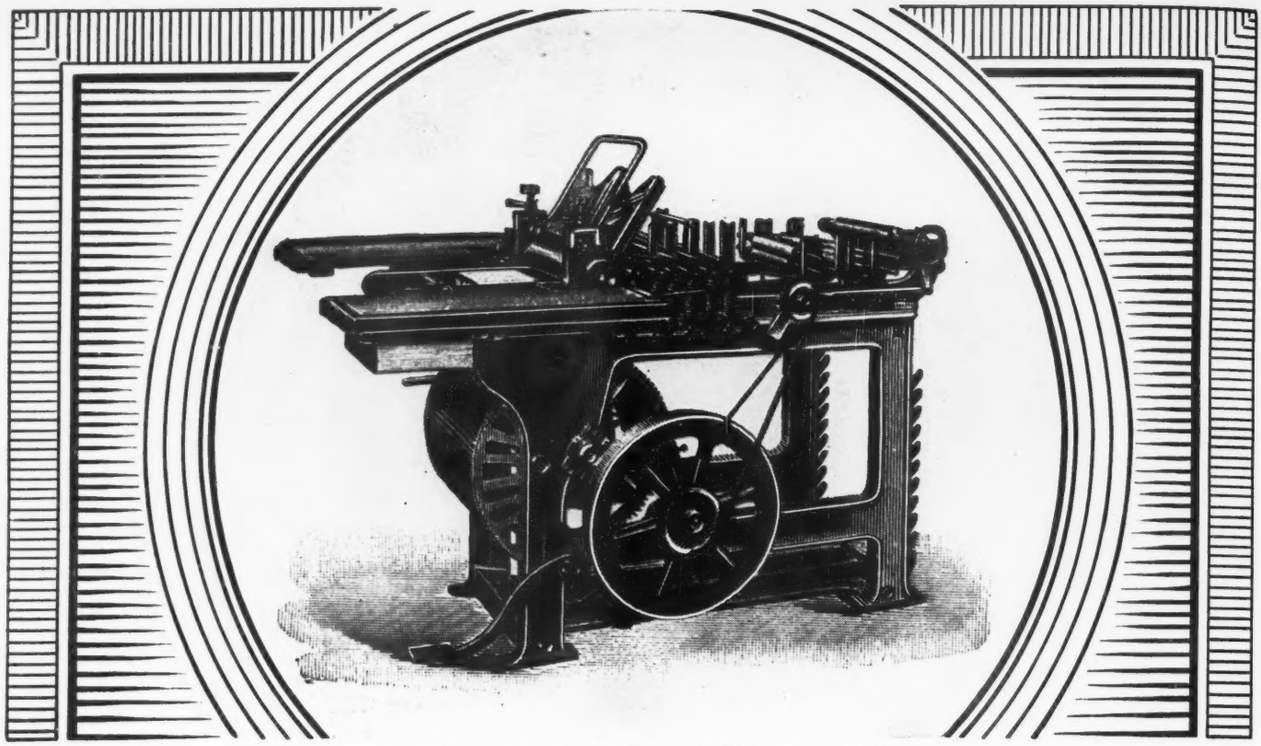
LOOK HERE—at the Miller Simplex cylinder, bed, inker and fountain.

The cylinder is fully exposed, at easy arm's height and length. The bed affords open and unhindered desk-top convenience. One lever pull opens the inker, fully exposing all rollers for quick cleaning and setting.

The aluminum alloy feedboard lifts positively but easily. The entire feeder swings back in a moment. The delivery frame (there is no carriage or heavy superstructure) is raised quickly with one hand.

You can see all superiorities of the Simplex in actual operation, without an iota of obligation, by merely requesting a demonstration. Or, if you prefer, write, wire or phone for detailed literature.

miller **MILLER PRINTING MACHINERY CO., PITTSBURGH, PA.**



HALLIGAN LITHOGRAPHIC MACHINE: Circa 1895

EVEN WHEN THE "HALLIGAN" MACHINE WAS "NEW FANGLED"

SAM'L BINGHAM'S SON MFG. CO. rollers

were giving lithographers finer reproductions

As the demand for litho-printing grew at the turn of the 20th century, machines of various designs appeared, such as the "Halligan press," pictured here. "This useful little job-bing machine is a decided innovation," wrote a commenter as late as 1903.

The Halligan dispensed with paper grippers, and "the sheet was held to gauges by the operator until caught between the small cylin-der and the moving stone."

Inking rollers were a critical element in the development of machine applications to lithographic and offset printing over the wide fields of textile, tin-plate, decalcomania and commercial work.

SAM'L BINGHAM'S SON MFG. CO. at that time had been roller makers for nearly 50 years, and could readily lend their assistance to the infant lithographic industry.

SAM'L BINGHAM'S SON MFG. CO.
MANUFACTURERS OF
PRINTERS' ROLLERS
LITHO-OFFSET ROLLERS

Today, through 16 con-veniently located facto-ries, SAM'L BINGHAM'S SON MFG. CO. continues to make available "the right roller right away" to all branches of the mod-ern graphic arts industry.

THERE'S A FACTORY NEAR YOU:

ATLANTA 3	DES MOINES 2	KALAMAZOO 12	OKLAHOMA CITY 6
CHICAGO 5	DETROIT 10	KANSAS CITY 6	PITTSBURGH 3
CLEVELAND 14	HOUSTON 6	MINNEAPOLIS 15	ST. LOUIS 2
DALLAS 1	INDIANAPOLIS 2	NASHVILLE 3	SPRINGFIELD, O.

1847-1947
ONE HUNDRED YEARS OF ROLLER MAKING

PRINTING EQUIPMENT *Engineer*

Volume 75 Number 1

A technical publication for the mechanical executive responsible for printing production, equipment and supplies in the commercial, magazine, private plant and daily newspaper field.

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Subscription price per year, $3.50 in advance in U.S.A. Single copy current issues 35c; feature issues $1 per copy; December Equipment and Supplies Catalog Issue $2 per copy in United States; $2.50 outside of United States. (U. S. currency). Subscriptions in foreign countries $4.50 (U. S. currency) in advance. Canadian printing plant mechanical and production executives receiving Printing Equipment Engineer under CCA regulations will be charged $1 postage per year in advance to cover additional postage to Canada.

Member Circulation CCA Controlled Audit

Printed in U. S. A.
Accepted under the Act of June 5, 1934, Authorized Feb. 25, 1946

LEADING ARTICLES FOR OCTOBER 1947

Exhaust System Removes Spray Gun Residue from Woodrow Press 23
By JEREMIAH J. SULLIVAN

Scarcity of Newsprint Causes Development of Device by Means of Which Three 12 in. Rolls are Spliced Automatically to Make 34½ in. Paper Web 25

College Annuals is Seasonal Work with Plenty of Problems 27
By JAMES CLYDE PORTER

International Craftsmen at Saratoga Springs 30

Glycerine in Printers' Rollers . . 32
By MILTON A. LESSER

Imposing is the Word for Elegant New Building of Newman-Rudolph Lithographing Co. in Chicago 35

Conference Dates 36

Equipment and Supplies 37

Tri-Power Cutting Press
Plastic Binder Screws
Miehle 29 Instruction Book
Drum Pump
Improved Paper Driller
New Radial Router
Installs G-E Electronic Press Drive
Static Eliminator Bulletin
Type Face Additions
Ten Models of Paper Joggers
Ships Colored Inks by Tank Truck
Zinc Dust Booklet
Copyfitter Folder
Humidity Bulletin
Hamilton Imposing Table Catalog and Design Kit
Lift Truck Guide
Type Page Frame
To Build Upham Attachment
Champlain to Manufacture English Gravure Presses
ATF Chief 22 Offset Press
Develops New Stringing Equipment
Materials Handling Book

70th Anniversary of Founding Marked by Plant Expansion of Crowell-Collier Publishing Co. 42

Care and Adjustment—Linotype Single and Mixer Distribution Boxes—Part II 44
By WILLIAM J. BUTLER

ITCA Holds Meeting in Detroit . 48

Constructive Program Presented at Printing Industry of America Convention in French Lick, Ind. 50

New Home of Pacific Press in Los Angeles 52

Summation of the Possibilities for Developing Improved Techniques in Printing Newspaper Color Supplements by Web Offset-Lith 54

Patents for the Graphic Arts Field 55

Proof Presses—How to Operate Them to Secure Quality Results 60
By O. F. DUENSING

Executive Paragraphs 64

for CLEANER impressions with LESS wear

TINGUE

TRADE MARK

PRINTING PRESS BLANKETS

TINGUE DRAWSHEETS

TOP

This drawsheet is firm, durable, economical and long-lived.

IMPROVED SATISFACTION

Coated with "Calvaprene" by du Pont, on a fabric which has been impregnated with "Neoprene".

GOLD TYMPAN CLOTH

An old favorite for flatbed presses. Skivered metallic surface accepts excess ink and flakes it off without smudging.

TINGUE UNDERBLANKETS

CUSHION CORK BLANKETS*

Highly resilient and recommended as the underpacking for "Combino" and Tingue coated Felt or in combination with Foundation Blanket or "Korker" where a drawsheet is used.

KORKER

This new Tingue printing press blanket is the result of years of experience and research in the construction of blankets.

FOUNDATION BLANKET

A firm durable oilproof underpacking laminated by du Pont with "Neprene" for use in combination with "Cushion Cork", "Korker" and Tingue Drawsheets or Felt.

TINGUE COATED BLANKETS

TINGUE FELT

Available in your gauge and size with pyroxyline or synthetic rubber coating.

COMBINO

A synthetic, laminated top blanket, extremely durable and a clean printer.

★Reg. U.S. Pat. Office

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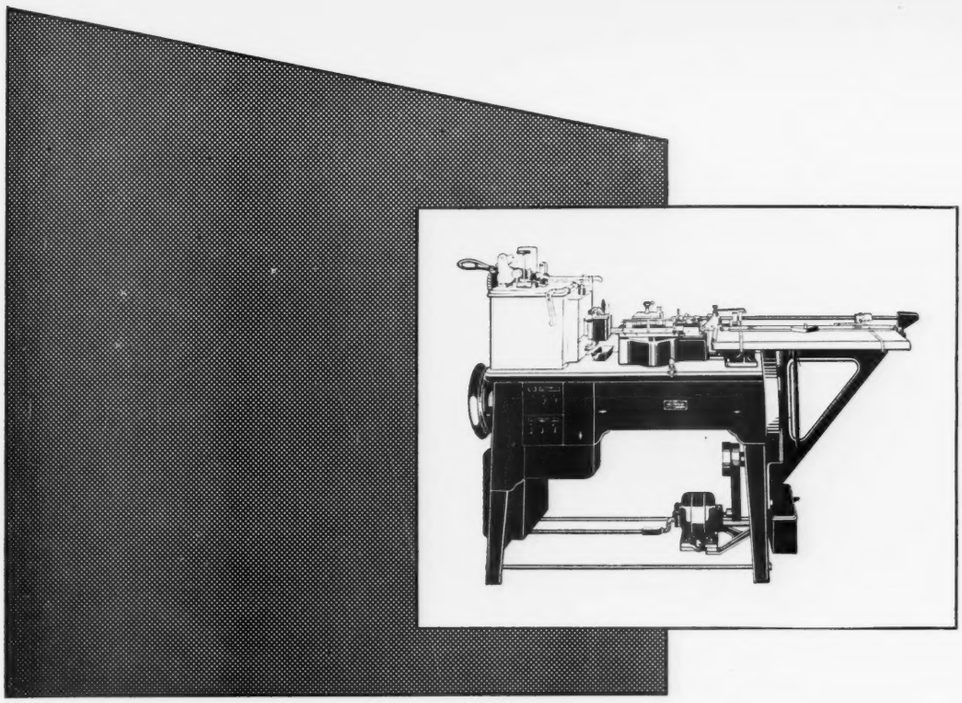


ELROD

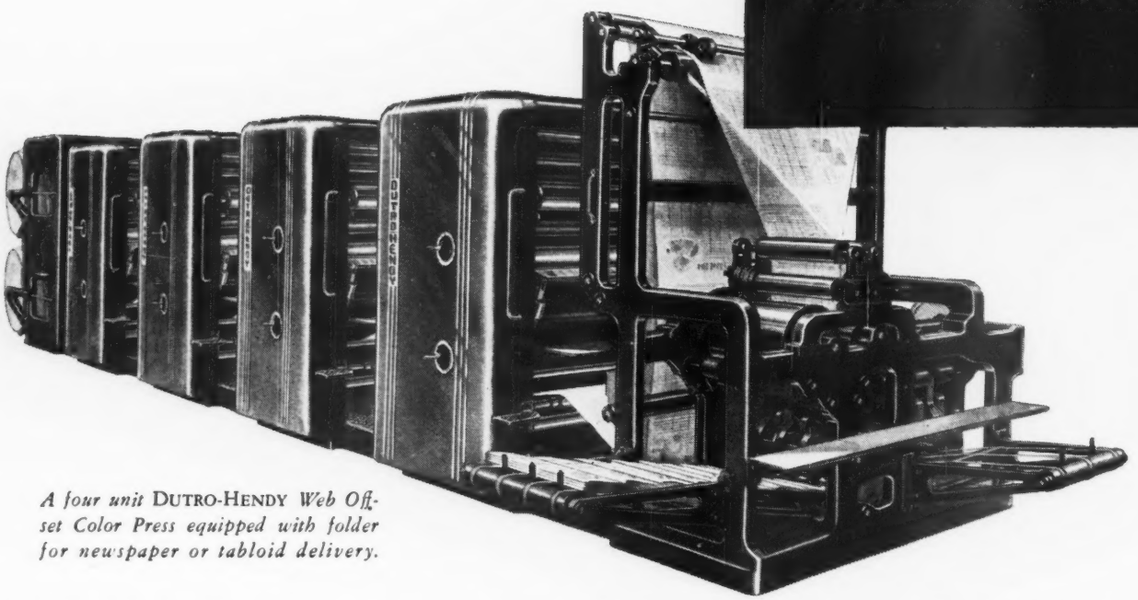
For An Unlimited Supply of Strip Material

Really efficient printing production requires plenty of strip material as well as an unfailing type supply. With material racks depleted, the compositor is compelled to "piece" leads, slugs or rule, rob standing forms, or perhaps even distribute to get enough material to finish a job, entailing extra expense that eats into profits. With an Elrod on the job, the printer quits worrying, as he has right at hand the necessary spacing and base material to complete his work quickly and accurately. The Elrod supplies high-quality leads, slugs, rule and base material ranging in size from 1-point to 36-points in thickness, the larger sizes providing base for cuts, electros or shell casts, and metal furniture for blocking out, for lockup and for general composing room use. Simple in design and mechanism, the Elrod requires only minimum attention, and produces an abundant and constant supply of material as one continuous strip of metal, cooled and solidified under pressure. Because of its dependable service, the Elrod has earned its place in the modern printing plant. Ask us about it.

Ludlow Typograph Company 2032 Clybourn Avenue, Chicago 14, Ill.

Get the Story Now!

THE REVOLUTIONARY
Dutro-Hendy
WEB OFFSET PRESS



A four unit DUTRO-HENDY *Web Offset Color Press equipped with folder for newspaper or tabloid delivery.*

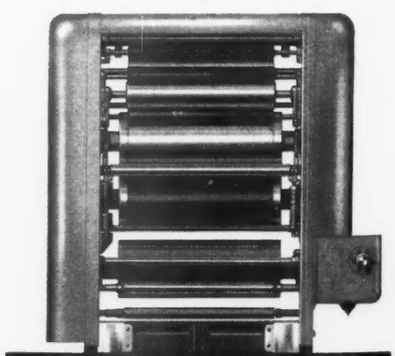
SOMETHING REALLY NEW IN THE WEB OFFSET FIELD

HERE ARE THE QUICK FACTS about the sturdy, streamlined DUTRO-HENDY Web Offset Press—the new all-use lithographic color press that has a place in all types of printing plants... AND WHY? Because of its ability to print IN COLOR on stocks ranging from light weight papers to light tag—INCLUDING NEWSPRINT, and using *up to 300 line halftone screen* on all of them. That means newspapers—full size or tabloid, or special sections. It includes complete publications—calendars—posters—maps and atlases—store display material—telephone books—directories—catalogs—magazine and color inserts—children's books—novels—funny papers—school books—office forms—wrappers—labels—light weight packaging materials—and such direct advertising as folders, broadsides, brochures and envelope enclosures... And with quick shift from one kind of job to another that means maximum press production.

SPEED? Much faster than sheet fed presses—up to 15,000 cylinder impressions per hour, depending upon the stock and type of delivery. FRONT and BACK COLOR PRINTING—in any combination, for any number of colors (one color for each unit). FLEXIBLE—additional color units can be added as desired. MAKE-READY—an hour *or less* per color by using pre-registered plates. QUICK SHIFT—less than a minute change-over time from folder to receding pile delivery or rewinder.

COMPLETELY AUTOMATIC — by electric control button the water, inking and impression rollers go into operating position in proper sequence and with proper timing, and on all units simultaneously . . . A very important feature.

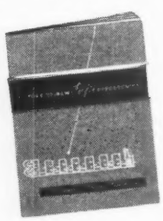
See the Working Demonstrations to be held soon at the new $6,000,000 home of Pacific Press, Inc., Los Angeles. *Watch for dates.*



Front Elevation of a Single Color Unit of the DUTRO-HENDY Automatic Web Offset Press

READY NOW—

your copy of "A Story of Profit Opportunity." It gives additional specific information about this new, modern press—the "money-maker press."

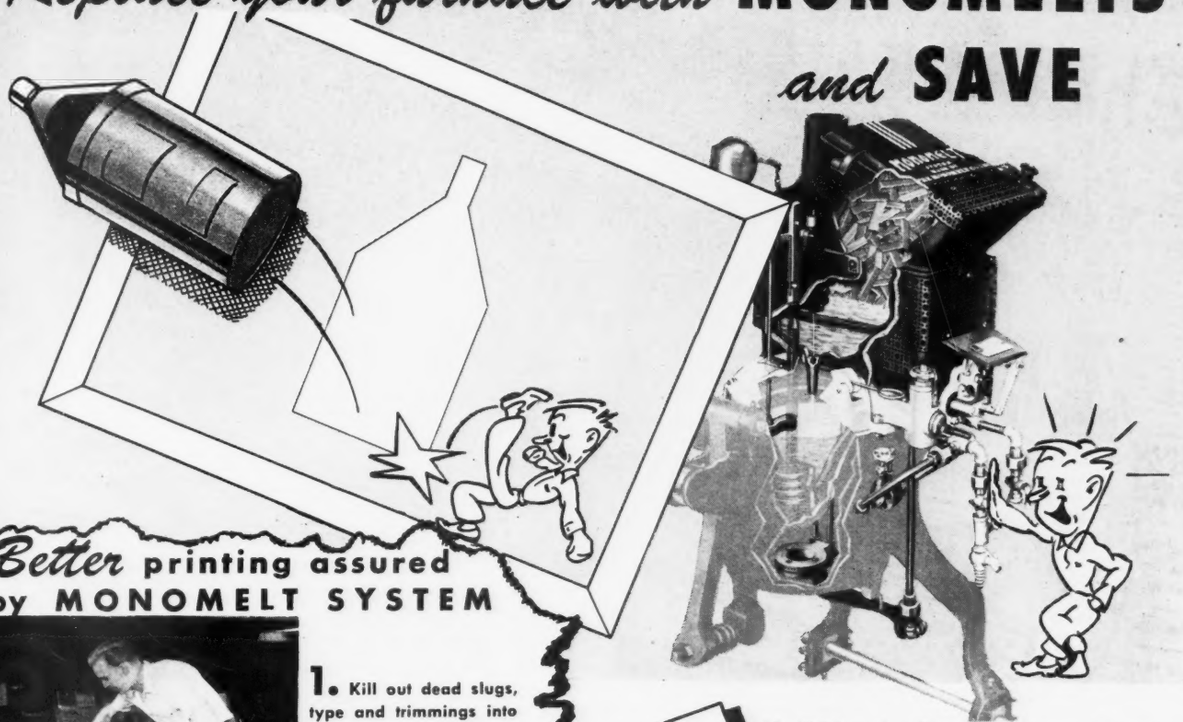


JOSHUA HENDY CORPORATION

601 WEST 5TH STREET, LOS ANGELES 13, CALIFORNIA

If You Have Up To 17 Typesetting Machines

Replace your furnace with MONOMELTS *and* SAVE



Better printing assured by MONOMELT SYSTEM

1. Kill out dead slugs, type and trimmings into handy-sized scoops in killout cabinet.

2. Metal-filled scoops are stacked in special racks beside the typesetting machine.

3. Each scoop is emptied directly into the MONOMELT hopper. From this point the MONOMELT System is automatic.

TIME Abolishing the dirty, smoky metal furnace and replacing it with efficient direct feeding of slugs saves labor and extra handling. No melting, no pigging and remelting . . . relieves furnace man for more productive labor.

METAL Melting your metal only *once* for each time you use it (at lowest possible temperatures) reduces dross losses from 50 to 75% . . . requires less frequent toning . . . permits up to 50% smaller metal inventory.

MONEY One typical example of money-savings: in ONE year's time in a newspaper plant where 17 line-casting machines were used, MONOMELT saved $587.48 in type metal and dross, $686.20 in labor and handling, or a TOTAL of $1273.68. This was *before* the war. With present labor and type metal costs, even greater savings can be made.

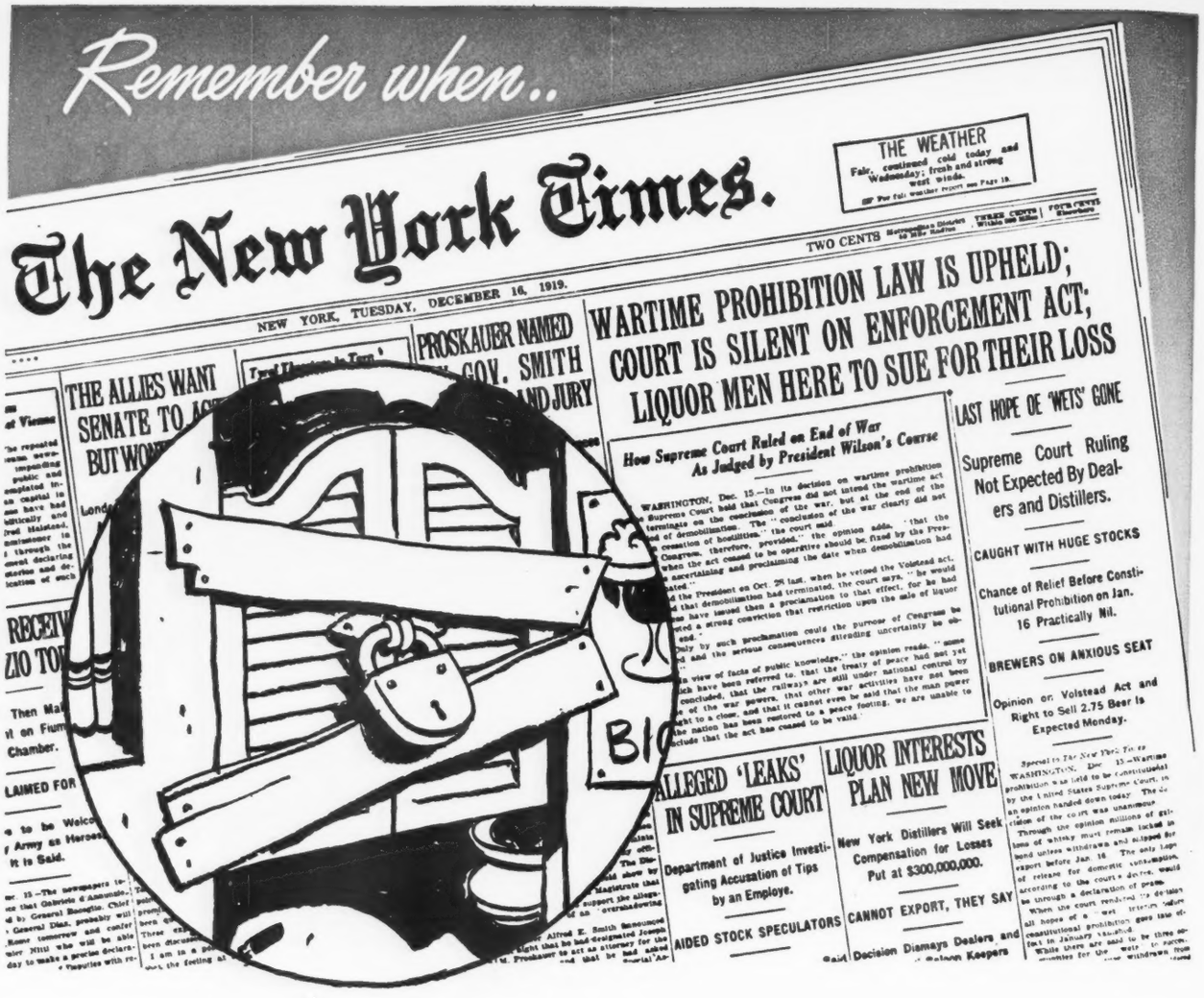
MACHINE TROUBLES Controlled feeding of clean, uniformly-heated, properly-balanced metal assures sharp, solid slugs . . . eliminates fouled throats, squirts, excess air . . . means less "down time," fewer corrections, less makeready.

WRITE TODAY for new illustrated bulletin showing how MONOMELT can help you.

THE

MONOMELT CO., Inc.

1611 N. E. POLK STREET MINNEAPOLIS 13, MINNESOTA


Remember when..
The New York Times.
THE WEATHER
Fair, continued cold today and Wednesday; fresh and strong west winds.
TWO CENTS
NEW YORK, TUESDAY, DECEMBER 16, 1919.
WARTIME PROHIBITION LAW IS UPHELD; COURT IS SILENT ON ENFORCEMENT ACT; LIQUOR MEN HERE TO SUE FOR THEIR LOSS
How Supreme Court Ruled on End of War As Judged by President Wilson's Course
THE ALLIES WANT SENATE TO
PROSKAUER NAMED
GOV. SMITH
AND JURY
LAST HOPE OF 'WETS' GONE
Supreme Court Ruling Not Expected By Dealers and Distillers.
CAUGHT WITH HUGE STOCKS
Chance of Relief Before Constitutional Prohibition on Jan. 16 Practically Nil.
BREWERS ON ANXIOUS SEAT
Opinion on Volstead Act and Right to Sell 2.75 Beer Is Expected Monday.
ALLEGED 'LEAKS' IN SUPREME COURT
Department of Justice Investigating Accusation of Tips by an Employe.
AIDED STOCK SPECULATORS
LIQUOR INTERESTS PLAN NEW MOVE
New York Distillers Will Seek Compensation for Losses Put at $300,000,000.
CANNOT EXPORT, THEY SAY

Dayco Printing Roller Experience goes back to 1919, too!

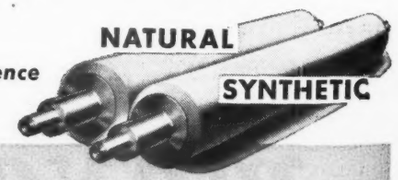
A lot of ink has gone over printing rollers since barrooms were shut . . . days of "bathtub gin", rum runners, The Roaring Twenties . . .

Those were the years Dayton Research was finding ways and means to produce better natural rubber newspaper rollers. Printing rollers that could be used the year 'round—regardless of temperature and humidity—that wouldn't melt in the summer, chip or crack in the winter. Then, in 1933, Dayton rang the bell for newspapers throughout the world when it developed the first roller able to stand the gaff of today's high-speed presses. On this early beginning, Dayton has been continuously building finer rollers for the newspaper presses of America.

If you are not yet a Dayco user, write today for full information on great new Daycos—of both natural and synthetic rubber. Address: Dayton Rubber, Dayton, Ohio, or Thomas M. Dolan Co., 55 W. 42nd St., New York 18, N. Y.

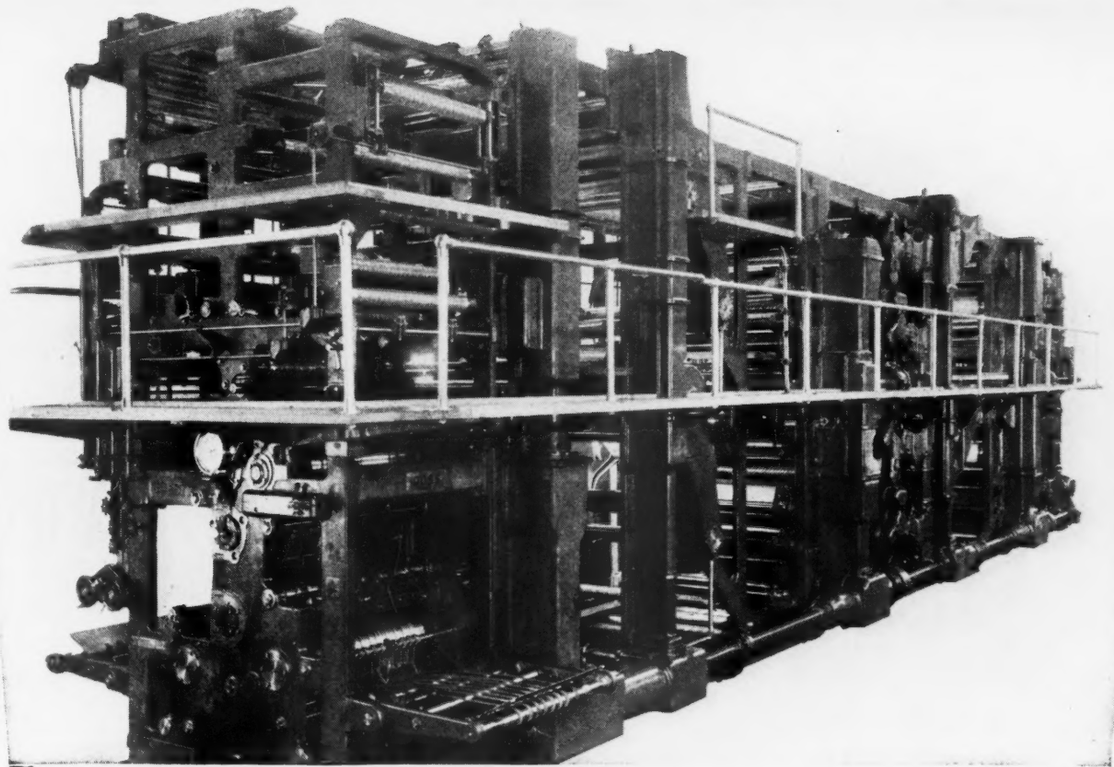
When you go to press . . . GO DAYCO!

1919-1947 *over a quarter of a century of printing roller experience*



Dayton Rubber

THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

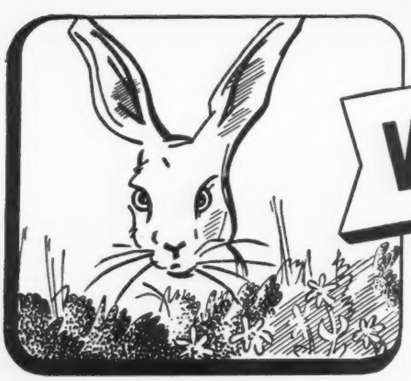


● *Built by THE GOSS PRINTING PRESS CO.*

MULTIPLYING THE EFFICIENCY OF GOSS MAGAZINE PRESSES

Many of the magazines at your favorite news stand are the products of modern SKF-equipped presses. SKF Ball and Roller Bearings multiply press efficiency by assuring accurate register and impressions, low starting torque, quick pick-up, high speeds and low costs. All these advantages—and many more—are the result of the extremely high accuracy, rolling alignment, low friction and minimum lubrication requirements of SKF Bearings. Wherever you find equipment translating thoughts into printed words, you will find SKF Bearings proving year after year that they are the right bearings in the right places. 6336

SKF INDUSTRIES, INC.
PHILADELPHIA 32, PA.

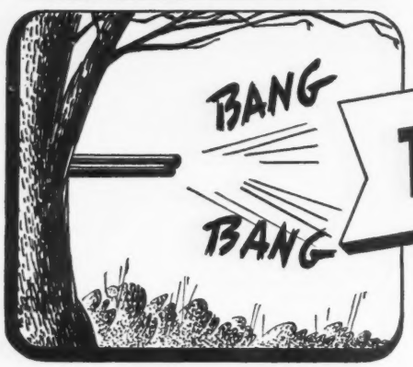


WHEN

MORE STEREO CAPACITY IS NEEDED

MONTHLY FUEL BILLS LOOK TOO BIG

YOU ARE LOSING TOO MANY CASTS



THEN

switch to modern practical KEMP immersion-gas-firing

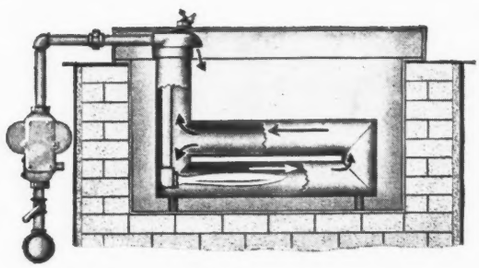
WHETHER you need more capacity or just want to improve present practice, a switch to KEMP stereo melting is profitable — because a KEMP immersion-fired pot quickly *saves enough to pay for itself*—then saves for you.

Here's why. First, a slash of 40% in fuel costs has been average experience in over 200 cases. Second, KEMP firing sharply reduces dross loss. Third, temperature control is so precise you enjoy sharper, surer casting results; cut time, labor and rejects.

KEMP firing puts the heat to work *inside* the pot, not under it. Result: maximum heat transfer with minimum fuel expense and remarkable speed. Even the "waste" exhaust gases are used — they blanket the metal, reducing oxidation and preventing heat losses.

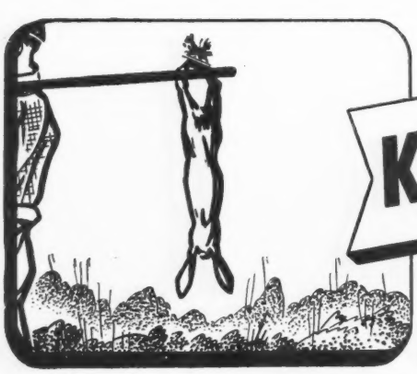
And the exclusive KEMP industrial carburetor comes with the job — to squeeze every pennyworth of heat from your gas supply.

There's a coupon in the corner.



HEAT THE *METAL*—NOT THE POT

Combustion is within tubular loops totally immersed in the metal. Recirculation of hot combustion gases around each loop (driven by the force of the burner flame) promotes efficiency and uniformity of temperature over the loop surface. When the hot gases do exhaust, they vent down over the molten metal surface, reducing heat losses from the system, and minimizing dross. Stereotype metal capacities from 2 to 12 tons—production rates from 20 to 480 plates per hour per pot—round, square and elongated shapes.



KEMP OF BALTIMORE

PRECISION CARBURETION + ADAPTED COMBUSTION FOR INDUSTRY'S HEAT USING PROCESSES

ATMOSPHERE GENERATION & ADSORPTIVE DRYER SYSTEMS FOR PROCESS CONTROL AND PROTECTION

JMLco K-J1 pe

THE C. M. KEMP MFG. CO.
405 E. Oliver Street, Baltimore 2, Md.

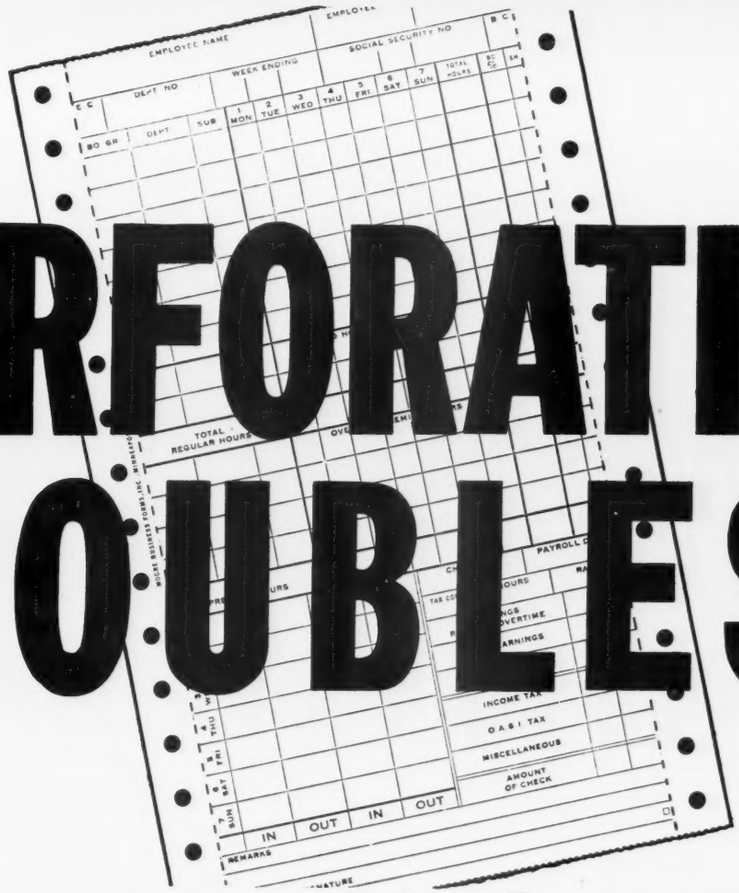
Send me your new 2-color 12-page booklet on stereo melting.

NAME_____

TITLE_____

COMPANY_____

PLACE_____



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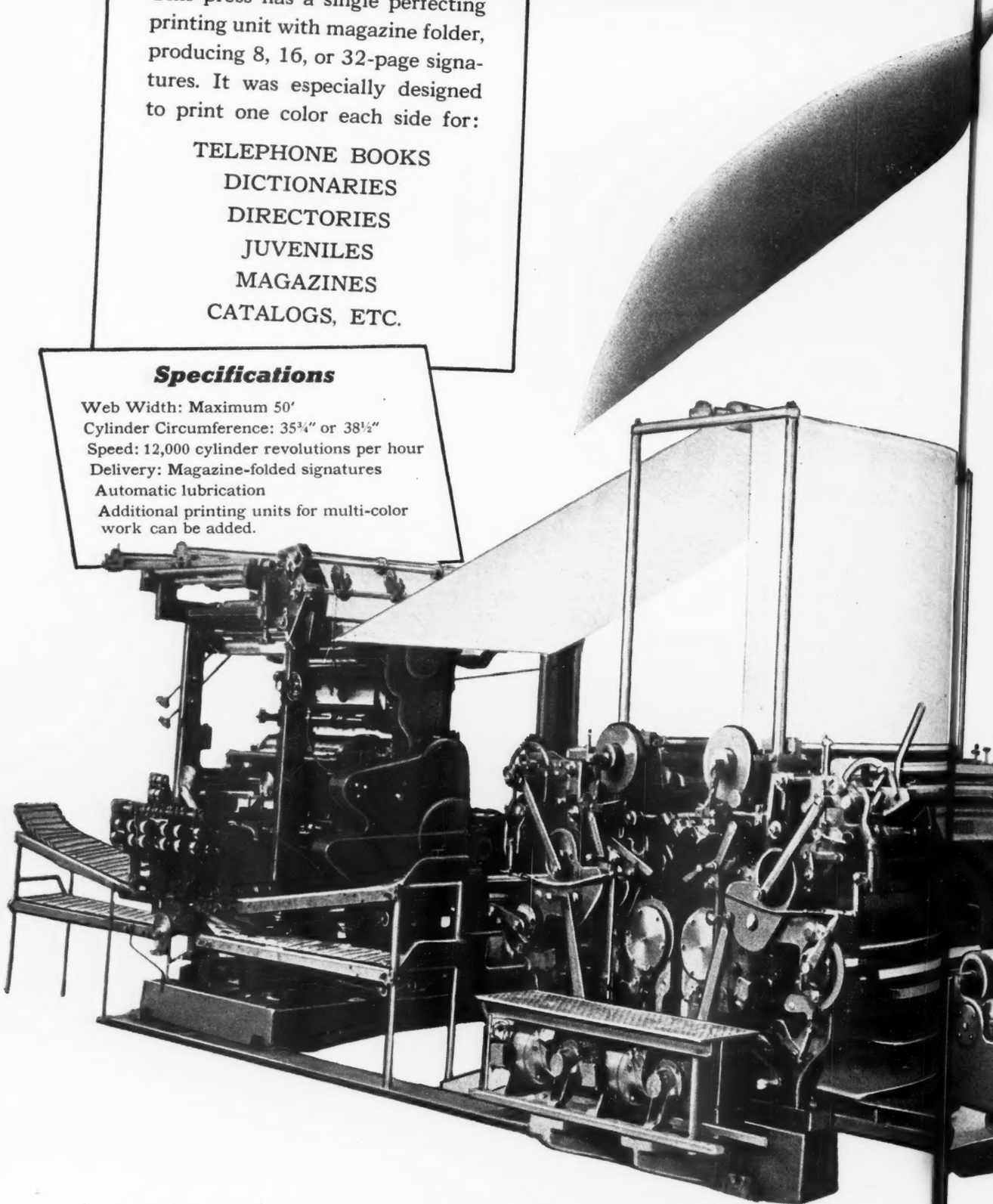

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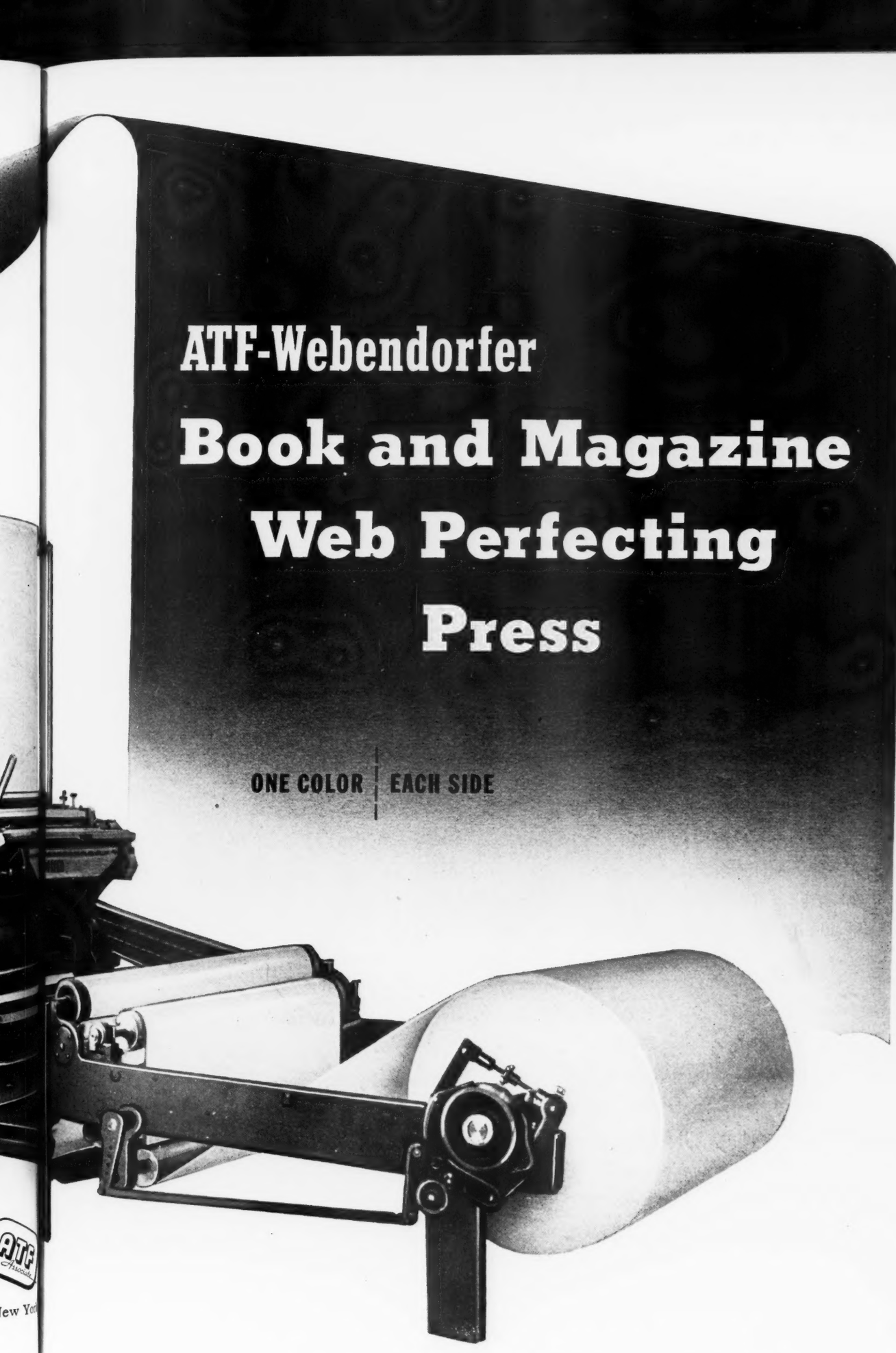
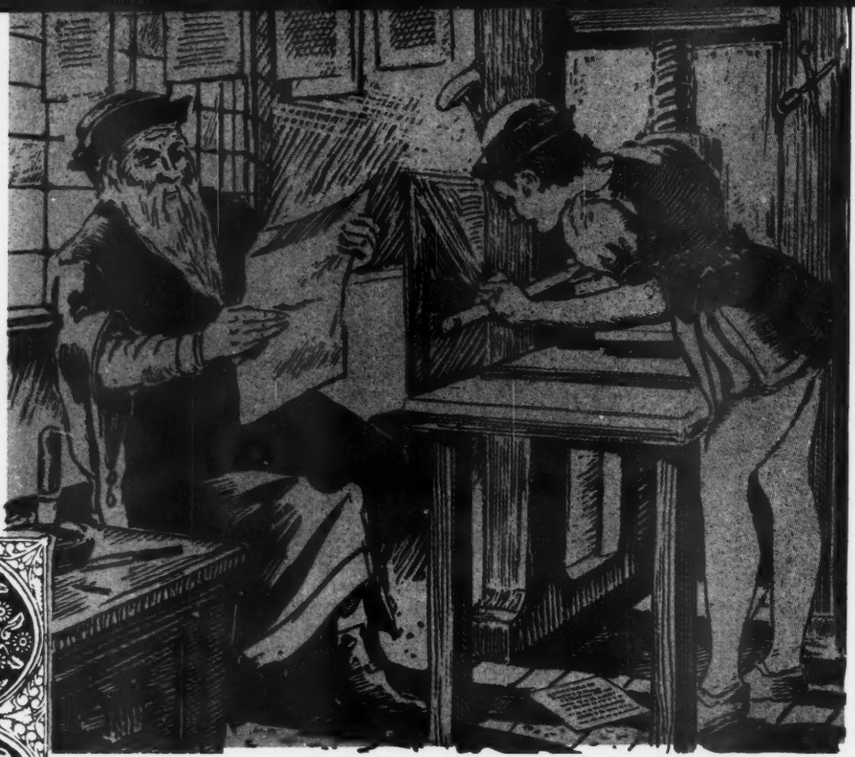




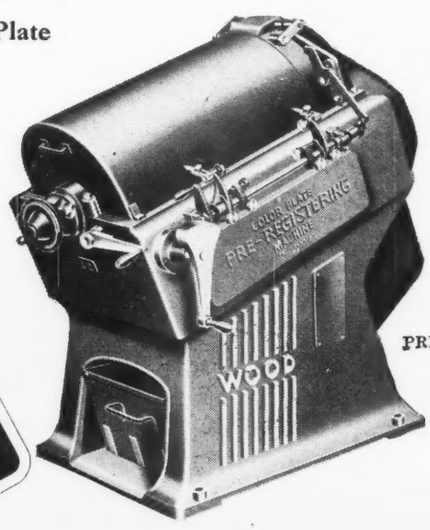
Number 3 of a Series on

Contributions to newspaper production

Back nearly five centuries ago, in the German town of Mainz, two citizens of that region produced a Liturgical Psalter which is famous in the story of printing, as the first book to bear the name of the printer and the place and date of production. More important, it was the first example of color printing—for the Mainz Psalter of 1457 was adorned with large decorative initials in two colors, red and blue.

"Fashioned by an ingenious invention of printing and stamping without any driving of the pen"—thus did Johann Fust and Peter Schoeffer describe the method they used in printing the Psalter—still a subject of controversy. Were these initials printed, while in the form, the red and blue prints inked separately, or were they stamped in after the page was printed? Authorities disagree, but there is no doubt that the initials were impressed, and therefore the 1457 Psalter ranks as the first attempt at printing in color.

Modern, high-speed *full-color* printing on newsprint, many times multiplies the problem of *"register"* which began with Fust and Schoeffer. Today, standard curved stereotype plates for 4-color reproduction are precisely, quickly "PRE-Registered"... *before* they ever reach the pressroom... on the new Wood Color-Plate PRE-Registering Machine. So well does this device function, that seldom is there anything left for the press room to do, but "lock up and roll". Folder on request.



Color-Plate PRE-Registering M

Initial from Fust & Schoeffer's Psalter of 1457

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KEEPING IN TOUCH ipi

PREPARED BY INTERNATIONAL PRINTING INK DIVISION OF INTERCHEMICAL CORPORATION • OCTOBER, 1947

GEMTONE* PROCESS INKS END DRYBACK; COLORS SPARKLE, DRY FAST, PRINT SHARP

Developed for Sheet-Fed Press Work

Dry on Top of Sheet Without Heat

Every pressman who has done four-color process work on a sheet-fed press has seen his best work lose some of its original brightness and sharpness because of a factor beyond his control. This factor is *dryback*, the tendency of even the best of conventional oil inks to penetrate and spread into the paper as they dry, blurring the halftone dots, dulling the colors, and dimming the highlights.

IPI Gemtone process color inks virtually eliminate dryback.

They set and dry on top of the sheet. Colors sparkle. Halftone dots remain sharp, and highlights bright.

The brilliance and strength of the Gemtone colors create a glossy effect that heightens the "snap" of the job. Printers are enthusiastic and customers have gone out of their way to compliment printers on the sparkle and beauty with which their products are pictured.

Inks Trap Beautifully; Crystallization No Problem

Other factors, in addition to dryback, which have created problems in four-color process printing are trapping and crystallization.

IPI Gemtone inks trap beautifully, increasing the strength of color.

As for crystallization, printers who have used Gemtone inks report that their crystallization worries are over. In fact, one printer has said, "Gemtone inks are practically foolproof."

Gemtone inks save hours drying time between press runs. They dry by an advanced principle similar to that developed for the famous IPI Vaporin† inks used on the fastest traveling webs. Unlike Vaporin inks, however, Gemtone inks do *not* require heating equipment for their use.

They give good mileage because no ink is lost in penetration.

Already Widely Used in Commercial Plants

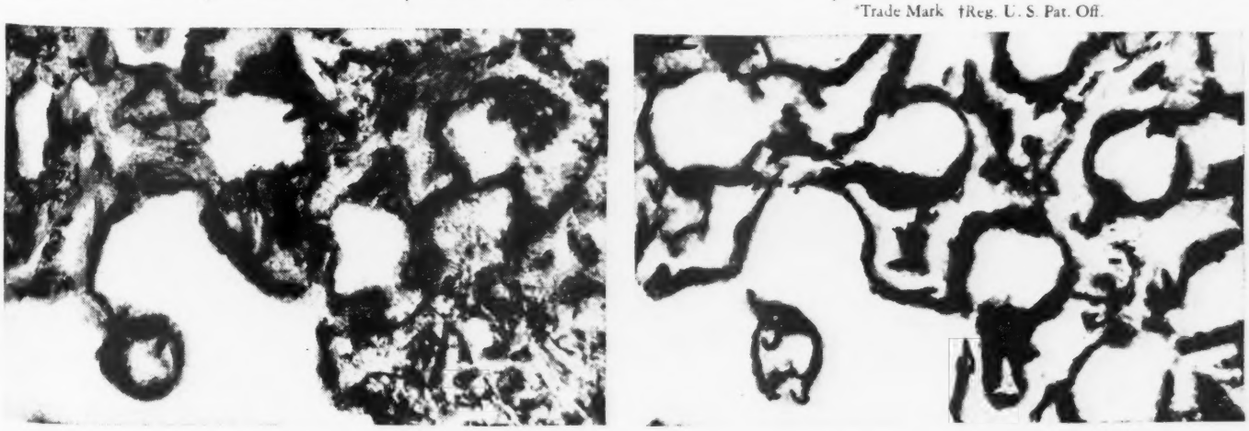
Gemtone inks are press-tested, proved, commercial inks ready for commercial use in your plant. They have been used with great success for process work on single-color presses, two-color presses, and four-color presses.

Gemtone inks are used by commercial printers for catalogues, direct mail, displays, inserts and labels, any type of quality, four-color work. They are also employed on the four-color pages of many national magazines in the quality group.

Let us give you more specific information about results secured with Gemtone. Even if you do little four-color process work, write for information. Gemtone inks are one of those significant developments in printing progress that a printer likes to know all about.

Write International Printing Ink, Division of Interchemical Corporation, Empire State Building, 350 Fifth Avenue, New York 1, New York.

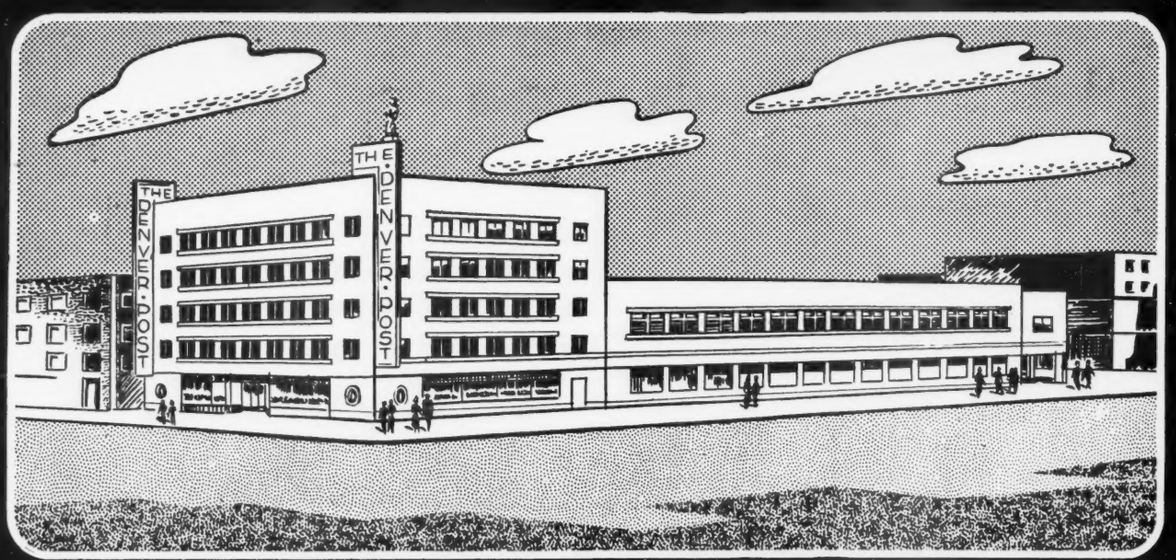
*Trade Mark †Reg. U. S. Pat. Off.



Customers say, "Gemtone Inks Sparkle!" Here's why Gemtone printing looks almost as brilliant when dry as it does when it comes off the press wet. These two unretouched photo-micrographs show why. (LEFT) *Photomicrograph of impression made with ordinary oil inks showing blurred halftone dots.* (RIGHT) *Photomicrograph of impression made with IPI Gemtone type ink, same spot on plate as on left, showing clean, sharp dots. Here virtually all the ink has stayed on the surface of the sheet. Printing is sharper, color stronger.*

How "THE DENVER POST" WILL SAVE PAPER AND IMPROVE PRINTING

.... with NEW G-E Electronic Press Drive and Color Register Control



ARCHITECT'S DRAWING OF THE NEW "DENVER POST" BUILDING.

This enterprising newspaper will be using the very latest in newspaper drives and color register control when the new General Electric equipment is installed. The drive is a post-war development using ignitron rectifiers to convert a-c to d-c power for smooth, simple press operation. The color-register control employs phototubes for automatic register to within 0.003 inch, responding to signals of 10 microseconds' duration.

Electronics in each case has eliminated the need for many moving and wearing parts, thus simplifying maintenance and cutting operating costs. On press setups where flexibility is desired, the electronic drive on the rotogravure press permits easy arrangement of any press combination. Power equipment is compact and metal enclosed. D-c drive motors are v-belt connected to the press shaft. There are no overrunning clutches, drive brakes, or threading motors.

The new electronic color-register control provides rapid, automatic adjustment of register at web speeds up to 1300 fpm. Variations in register due to splicing, acceleration, deceleration, unseasoned paper, and surface conditions of the paper no longer mean spoilage of hundreds of sheets of paper before register can be corrected. The electronic register control will save paper and give a better product. Anti-hunt circuits prevent overshooting on correction. Press-mounted equipment is explosionproof and shock-protected to guard against press vibration.

If you're looking for new drive equipment or color-register control—or both, consult General Electric specialists. They'll help you select the proper equipment for your needs. Just call the nearest office. ***Apparatus Department, General Electric Company, Schenectady 5, N. Y.***

GENERAL ELECTRIC

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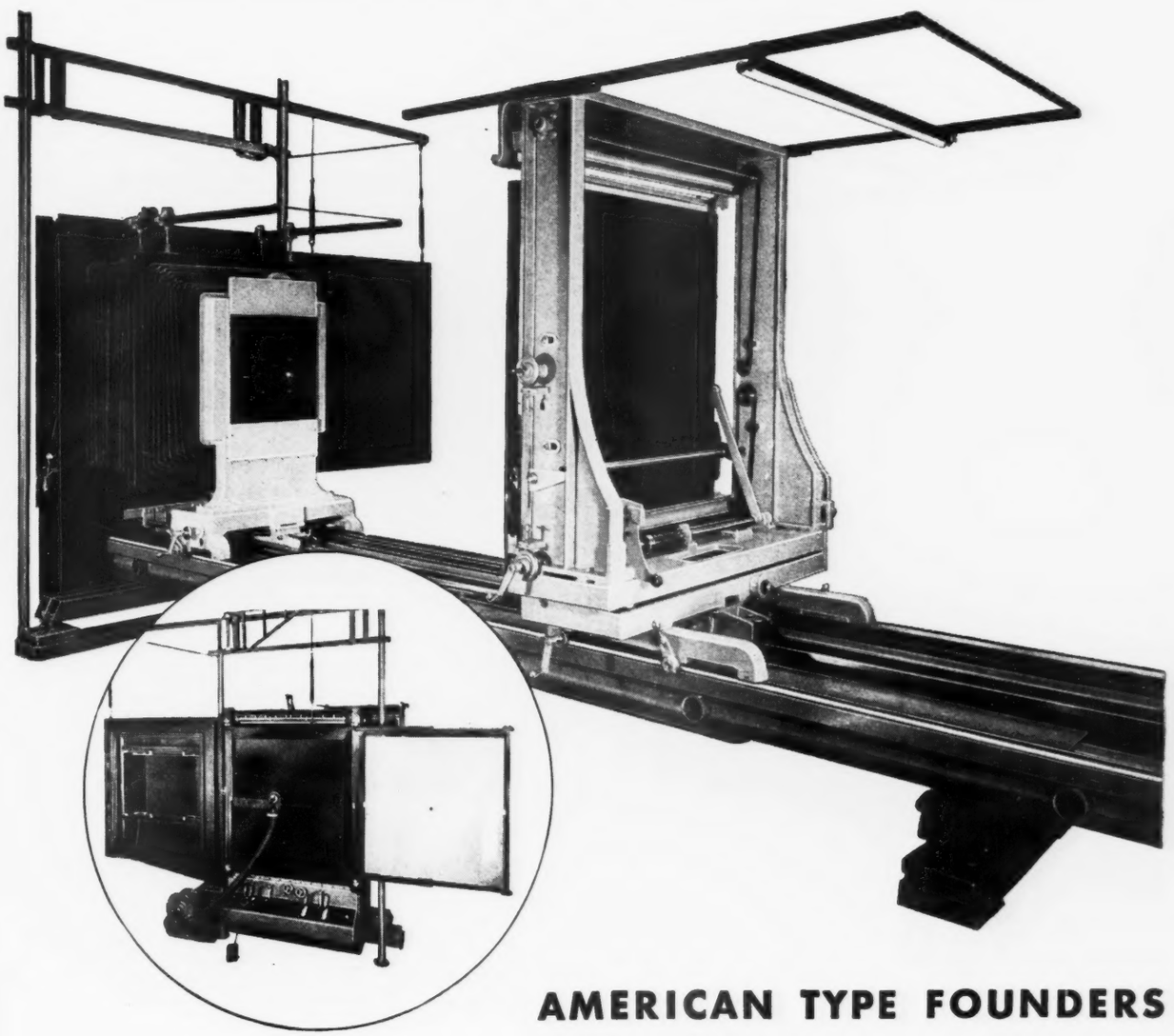
THE NEW 1948
ATF Color *Precision* Camera

Be sure to see it at the Convention of the National Association of Photo-Lithographers, Book-Cadillac Hotel, Detroit, Michigan, October 22-25. Complete information available from any ATF Branch Office, or write to



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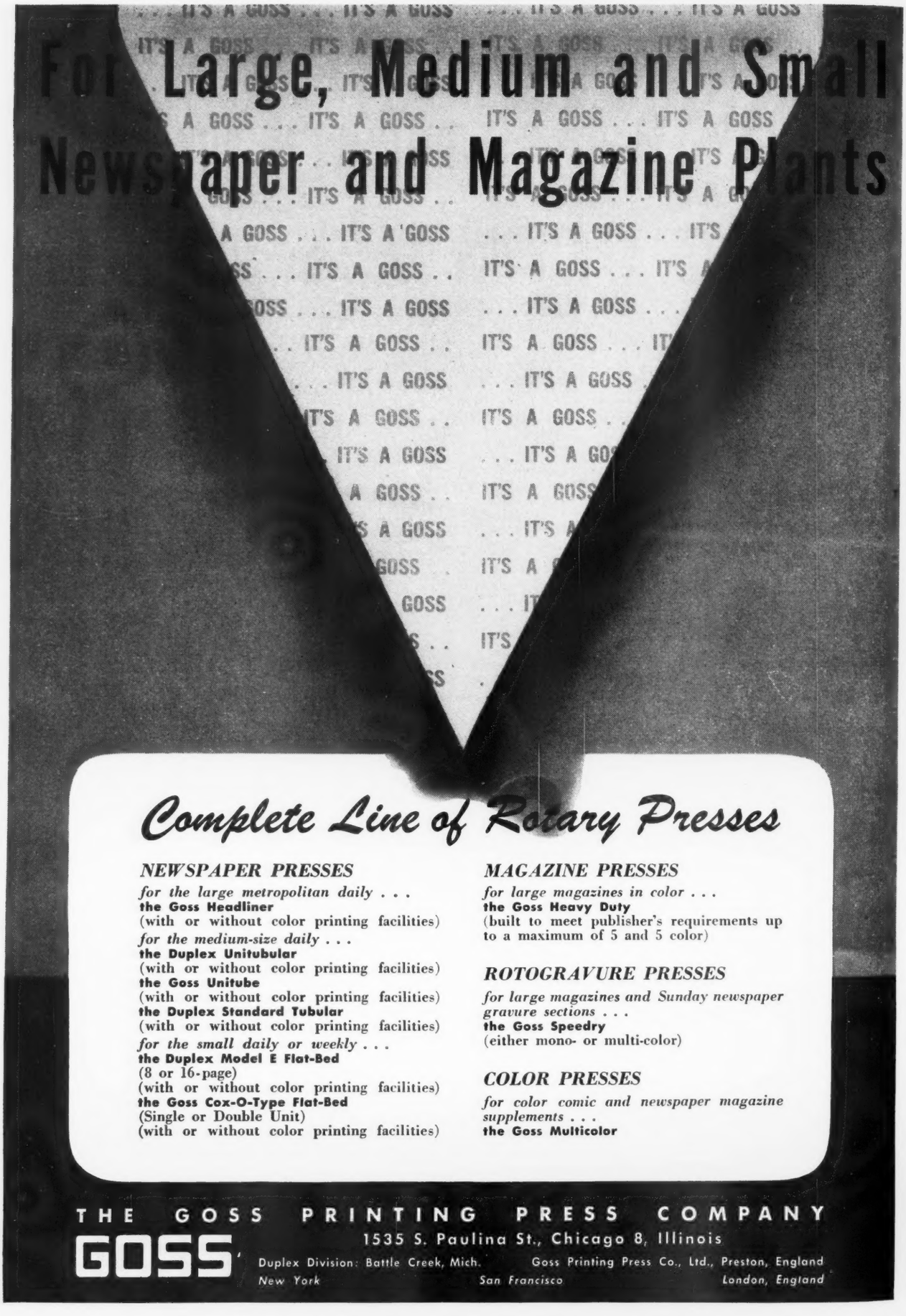
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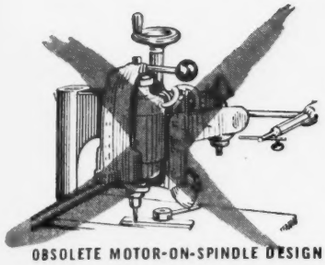
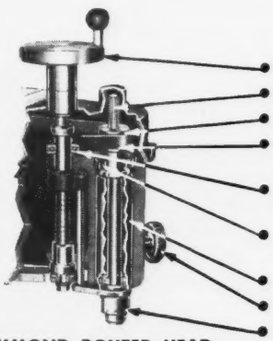
it's all in the HEAD



OBSOLETE MOTOR-ON-SPINDLE DESIGN

Hammond has discontinued the use of the universal type of motor because routing operations are too heavy for it. Costly motor burn-outs and shut-downs are now eliminated with a regular type constant speed motor, belted drive, and ball bearing spindle.



- Handwheel for raising and lowering spindle.
- Precision spline shaft spindle.
- Dynamically balanced pulleys.
- Belted drive from a ½ HP constant speed regular type motor.
- Ball Bearings for easy vertical spindle adjustment.
- Spindle ball bearings for high-speed trouble-free service.
- Quill.
- Spindle lock.
- Dynamically balanced 3-jaw chuck.

HAMMOND ROUTER HEAD

MODEL R-4

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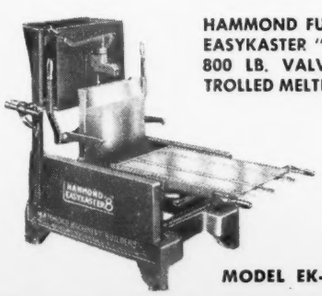
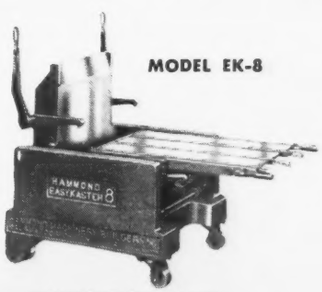
It's all in the head — and the Hammond Radial Router head HAS WHAT IT TAKES to give top routing performance and years of trouble-free service. The ball bearing spindle runs at 12,000 RPM. It incorporates the best type of design for this purpose — grease sealed bearings, quill and spline shaft. The pulleys and other parts are dynamically balanced for smooth, vibration-free operation. The Hammond Radial Router is fully powered, ruggedly built, and has the "feel" and sensitivity the operator needs. The machine has a capacity of up to full-page plates. Without obligation on your part, write us for complete information.



HAMMOND FULL PAGE EASYKASTER "8" WITH 800 LB. VALVE CONTROLLED MELTING POT.

MODEL EK-8P

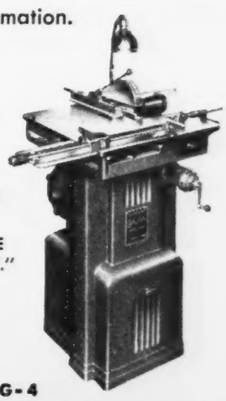


MODEL EK-8

HAMMOND FULL PAGE EASYKASTER "8" WITHOUT MELTING POT.

Glider TRIMOSAW

"THE SAW WITH THE BALL BEARING TABLE."



MODEL G-4

Hammond Machinery Builders INC.

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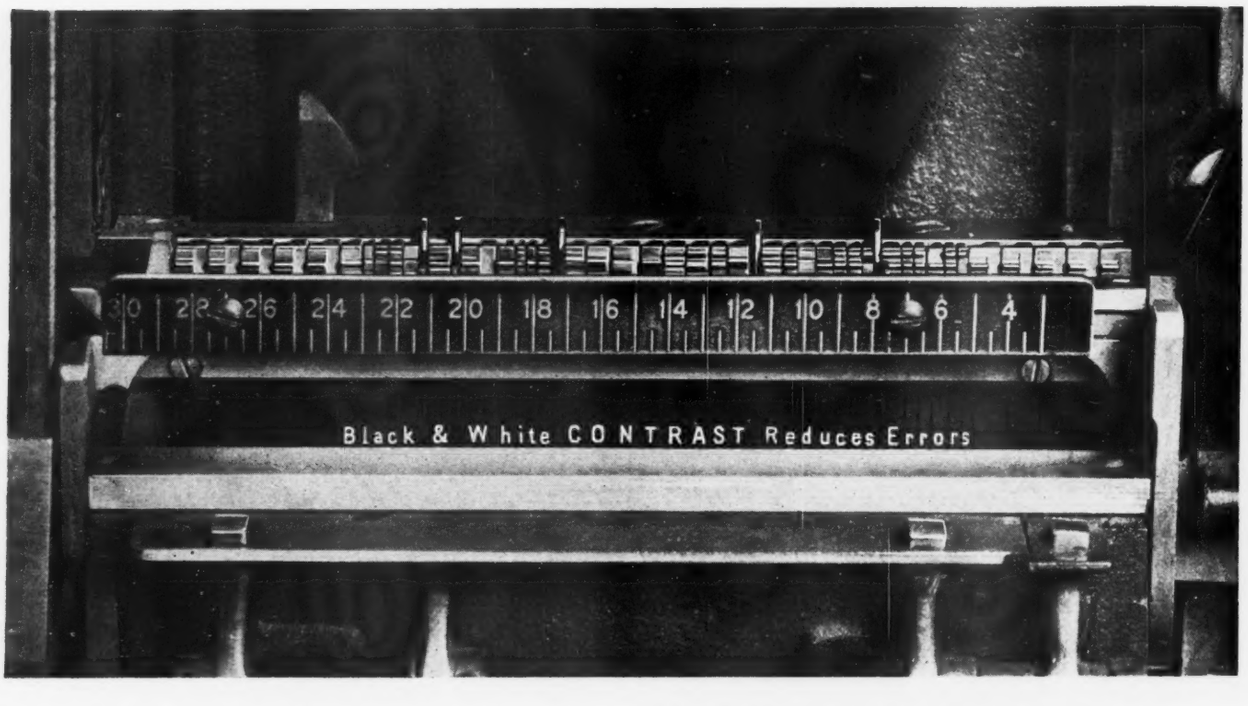
Why Matrix Contrast Service PAYS BIG DIVIDENDS



Matrix Contrast Service saves an average of one-third of all errors in original machine composition. This means not only a saving in operator and machine time ordinarily devoted to setting correction lines, but also saves the time of proofreaders, floormen and others. Besides, Matrix Contrast Service reduces eye-fatigue, conserves energy and promotes increased production.

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Matrix Contrast Service

Exhaust System *removes spray gun residue from plant of New York's Woodrow Press and flushes it into sewer — Air in plant clear at all times*

By JEREMIAH J. SULLIVAN

THE spray gun solved a problem in printing and made printers happy. Like the telephone, and the automobile, atomic energy and the flit gun, it's pretty certain the spray gun is here to stay awhile because it's indispensible.

But new-fangled things create problems as well as solving some problems. The telephone sometimes routs you out of bed at 3 a.m. to a "Sorry, wrong number," and many Sunday drivers chafe about that flat in the middle of the jammed highway. Few compliments came from the Japs on the atom bomb, and no one ever said that "Flit" smelled like Chanel No. 5.

Well, neither is the spray gun an unmixed blessing—that is, up to now it hasn't been.

The spray gun, under certain conditions, brought to some pressrooms an unwelcome layer of "snow," dry spray, on presses, benches, stock, pipelines, lighting fixtures, and whatever else was present to settle upon. Added to this is the usual accumulation of dust and dirt.

In many plants where composing room and pressroom share the same atmosphere, it isn't long after the presses start rolling that the compositor is detaching slugs from his fingers in the jerky manner of a cat that has just stepped on something sticky.

During the press run, the pressman's hands turn tacky and he steadily inhales the spray that he learns to accept as part of the business of keeping the presses rolling.

In some cases, mechanical problems of greater or lesser severity are an outgrowth of spray dust. The gummy quality of the spray after heat and humidity mix with it causes a caking of the spray that settles in oil holes, interfering with proper lubrication. Electrical contacts suffer by the film. Performance of contact points of starting boxes and the commutator brushes are hampered by the accumulation of spray dust.

Still another lubrication snarl is spray picked up by the filter in the automatic pumping equipment. The dust deposit forms a sludge on the surface of the filter, barring the pump from building up pressure sufficient to produce adequate lubrication.

Stock-feeder suction lines may clog from dust, although some of it is stock dust. Air compressors suck in spray dust and normal foreign matter from the air, causing filters to block and, unless carefully watched, air-compressor motors may burn out.

Dry spray dust floating around the pressroom adds to the problems. A certain percentage of dry spray dust is inert matter, not solvable in water, oil, or various acids. This insoluble portion of the dry spray acts, it is believed, as an abrasive on press rollers, causing them to wear faster than normally.

Spray dust problems are sufficiently vexing in pressrooms as to have stimulated writings in printing trade journals discussing measures that help to reduce the effects of the dust, but only to the extent possible by prosecution of limited precautions.

The suggestions and advice heretofore published necessarily have been restricted to the condition of *coping* with spray dust: whereas this article tells how with new developments the offender, spray dust, may be *captured* and *banished*.

About five years ago Herman Tugender, President of the Woodrow Press, 227 East 45th Street, New York, N. Y., decided he didn't like spray dust nuisances anymore than his confreres did. But Tugender has an effective kind of urge that he appeases with fine engineering skill and self-taught chemistry. During a lifetime in printing he has developed the answers to more problems than he can now remember. Among his achievements are creation of the Tugg composition chart and the loose-blocked engraving system.

Tugender, affectionately known as "Tuggy," sniffed the wet spray fog in his plant in years gone by, ran his fingers through the layer of "snow" that settled around his 100 by 100 sq. ft. of plant space, and something started tugging at Tuggy. The particular genius of Tuggy is to churn over practical solutions to practical problems, and he doesn't stop churning until he arrives at the answers.

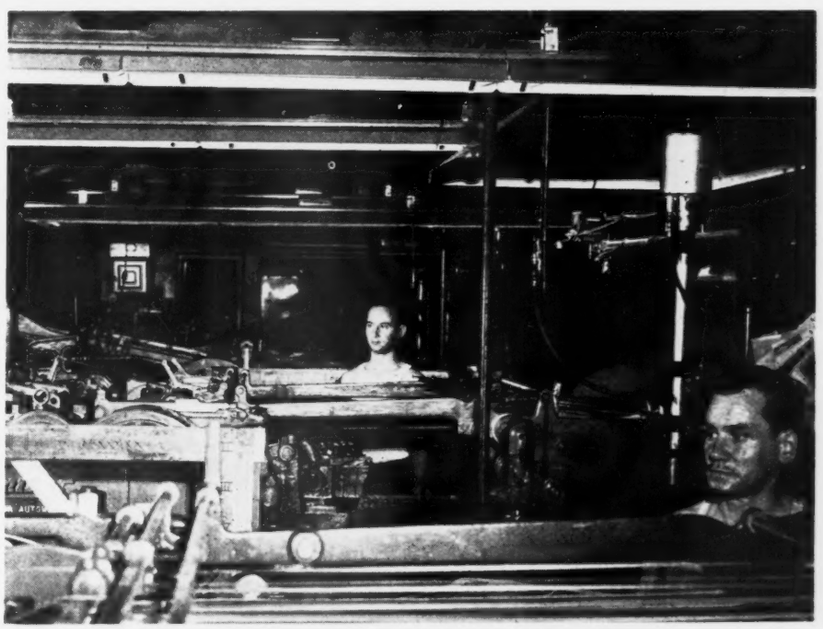
A lot of long pencils were worn to stubs and much besides spray dust got in Tuggy's hair before he dug out an idea that he thought would KO spray dust. Wet spray is soluble in water, he learned. Not so astounding a fact. But Tuggy burned a lengthy chain of the Havanas he likes trying to devise the way to *unite* spray with water. "A fine wedding, if I can swing it," Tuggy mused.

For some time Tuggy thought his head scratching would gather little more than spray dust under his fingernails. He cogitated over the systems already developed to exhaust the spray, and between writing to his three sons in the army and drawing diagrams Tuggy wore down many pencils. He exclaims, "I even used up the erasers."

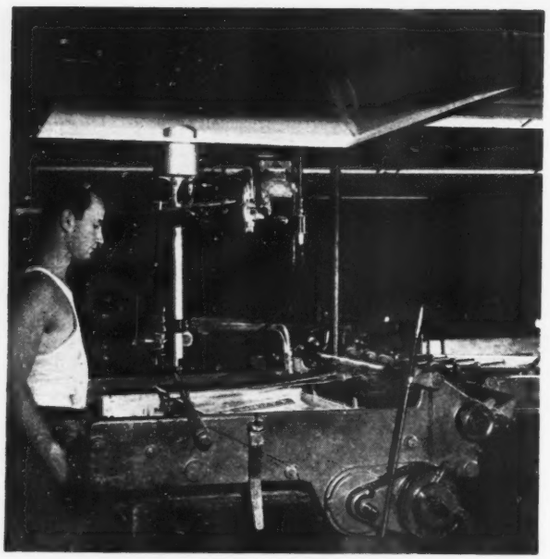
But the seedling idea grew into conviction and then into scale plans, controlling features, and all the rest of the criss-cross that are the delight of the engineer and the despair of the layman. He eventually consulted an engineer. "Won't work," said the consultant about the drawings Tuggy laid before him.

"Don't believe it," thought Tuggy. So he consulted another engineer who echoed the opinion of the first.

Undaunted, Tuggy talked over his idea with a third engineer, and was re-



In the Woodrow Press, New York, the mechanical departments are within one room. Six presses (letterpress) busily turn out their capacity. This view was taken during working hours with spray guns operating on all presses. The photographer had no trouble getting a picture because of the fluorescent-lighted work areas. Spray residue is withdrawn upwardly through hoods suspended above the spray guns and then is exhausted through connecting air ducts. Built into the duct is water-sprinkler apparatus that washes the spray solids into the sewer along with the soluble elements.



Close-up of ventilating and spray residue gathering hood above one of the presses in plant of Woodrow Press, New York. Atmosphere is clear at all times.

warded with: "Mr. Tugender, I can do it, if you'll pay the bill."

That was in the spring of 1946 when Engineer Kenneth G. Melhado, President of the Axial Products Corp., air conditioning and ventilation engineers, agreed to manipulate Tuggy's wedding of dust with water.

There were a few bugs to be solved, Melhado confessed, but he confounded the opinions of the two predecessor engineers consulted by overcoming their reasons for rejection of the union possibility.

Tuggy got his wedding. Spray dust met water and off they went together.

The letterpress division of the Woodrow plant is about equally divided between pressroom and composing room, and prior to the development of Tuggy's spray-removal idea, the composing room staff endured the nuisances common to the spread of spray dust.

With the plant's six presses rolling and their spray guns spraying joyfully, *now* the atmosphere in the plant is clear, equipment is clean, and the temperature is relaxing for the workers and satisfying for the mechanical considerations of printing.

Observation of the comfortable manner of the men at work, together with the cleanliness associated with a Dutch cottage, compel plant visitors to confirm the satisfactions of the pressmen and the compositors. One visitor to the Woodrow Press is the owner of an important printing establishment. He took his plant superintendent along for the inspection of the spray-removal equipment. All the Woodrow presses were rolling as he opened the door into the pressroom. One swift look and the visitor started out again.

"Aren't you going to look it over?" Tuggy queried, disappointment filling his soft voice.

"What for?" the visitor shot back. "I see the result. I don't care how you get it."

Well, for those who like the "how" of things, here are most of the answers.

The equipment performs a dual role: It ventilates the air and exhausts the spray-contaminated air through a duct system. The secret of Tuggy's wedding achieves a 95 per cent removal of the dust, and two factors are responsible for its success:

1. The spray is attacked at its origin, being sucked up through a hood suspended above the spray guns and then exhausted into the connecting air duct;

2. Built into the duct is water-sprinkler apparatus that dissolves the soluble portion of the spray and washes away into the sewer the insoluble part of the spray.

Those are the fundamentals of the spray-removal apparatus.

The flowing water performs its task completely; the ducts need never be cleaned as there is no deposit of spray remaining to be removed.

Engineering adaptations were necessary to effect a constant flow of water without damage to plant or equipment through condensation or leakage. By means of specially designed internal construction and the use of gravity, together with soldered copper air ducts and copper piping, the fundamental problems were solved. The use of copper also insures durability.

There are no secrets to the ventilation system. Incoming air is filtered to remove normal dust and foreign content, and it is exposed to ultra-violet rays for purification. Fresh, clean air is steadily replacing the exhausted foul air, accounting for the odorless and clear plant atmosphere. Windows are kept closed.

For winter, when there are snow flurries outside as well as "snow" inside the plant, the ventilation technic includes a gas-fired furnace capable of instantly raising the temperature of the incoming, filtered air by 60 deg. without the aid of the building's heating system.

Graphic Arts Ventilations, Inc., New York, N. Y., launched by Tuggy in May this year, throws the new spray-removal development open to all. Joined with Tuggy in the new company is Melhado as engineer, whose Axial Products Corp. customs-builds the spray-removal ducts and installs the apparatus under Melhado's supervision. Tuggy remarked to the writer:

"The spray-removal equipment is invaluable not only to the pressroom, but also to any manufacturer with a dust problem, such as paper box, coffee, or

(*Continued on Page 76*)

pH Control in Offset-Lith*

IN THE Lithographic Technical Foundation we believe we know as much about pH control and have published as good information as anybody and yet certainly less than 20% of the litho plants have any pH control at all.

In our new association with Armour Research Foundation we have vastly improved facilities and available manpower and consequently we have much broader scientific knowledge and experience. They have told me that we might as well stop work on pH in the lithographic process until it can be thoroughly coordinated with the pH of paper and of ink and all three closely related to the surface chemistry of the varying plate metals now being employed.

Running through the communications from both so-called practical and technical men is constant reference to the pH of coated papers upsetting the applecart of the pH of fountain solutions on a lithographic press and that's one reason why some who tried to understand and apply pH-control have dropped it.

One of the larger lithographers reported that the difference in price between coated and offset seems to be far outweighed by the quality of the finished piece of lithography in relation to its brilliance and all around better appearance for special jobs. Yet, he reported that there was much difficulty in securing a supply of coated stock that could be run through the press without trouble. The trouble seemed mainly to be in the proper adherence of the coating to the body stock. This lack results in picking, tearing and fuzzing of the sheets or the necessity of reducing ink volume and brilliance in order not to lift the paper surface. Anything lighter than 70 lbs. was practically unusable except for light colors. This man felt that future developments in the use of coated papers in that particular plant depended very largely on better 60 lb. coated paper primarily from the standpoint of relatively new markets for them in mailing units where light weight was most important. He seemed to recognize the serious problem in the development of a body stock for this light weight paper that would provide a satisfactory basis for good surface and opacity, etc.

*Abstract of address by W. E. Griswold, Executive Director, Lithographic Technical Foundation, before Coating Committee of American Pulp & Paper Mill Superintendents Association, Inc., Poland Spring, June 1946.

"Ruling" by Offset*

AN innovation in the Government Printing Office which has saved as much as $20,000 on a single job, is the substitution of printed offset ruling for pen ruling. By the offset method, rules and type are set and repro proofs pulled; or, the lines may be hand-drawn for photographing. A fine one-way screen is used to control the tone intensity of the lines. Solid lines are secured by scribing through the negative to cancel the screening. Reading matter is stripped in. In the manufacture of journals and other numbered-page books, the pages are imposed in signatures and gathered in sequence. The saving in time and money are easily apparent and the job suffers little in appearance as contrasted with actual pen ruling, as I think you will agree on looking at the examples.

*From address delivered by Hon. A. E. Giegengack, United States Public Printer, Washington, D. C., before Philadelphia Club of Printing House Craftsmen, April 1946.

Scarcity of newsprint causes development of device by means of which three 12 in. rolls are spliced automatically to make 34 ½ in. paper web

THE Gadsden (Ala.) *Times* is utilizing a mechanism which forms one 34½ in. web from three 12 in. rolls of newsprint stock by automatically pasting the joints while the printing press is in operation. The joint or overlapped edges where the pasting occurs is approx. 1⅛ in. wide. The *Times* press is operated at 18,000 copies per hr.

The attachment was designed by Curtis DeLamar, Publisher, and Louis Taylor, Pressroom Superintendent of the *Times*. The two paster mechanisms utilized in the device were developed by Charles Medlin, Press Superintendent of the Orlando (Fla.) *Sentinel-Star*.

Mr. DeLamar stated that development of the splicing device was due to the scarcity of standard width newsprint roll stock. The 12 in. rolls which are spliced by his device are more easily procurable from the mills inasmuch as they represent the butts trimmed from the standard rolls.

Mr. DeLamar stated: "We have eliminated all the bugs and feel that we are able to recommend the pasting of three narrow-width rolls outside the press and then lead the sheet into the press at the same place as if it were a standard roll."

The frame work of the newsprint splicing attachment is constructed of channel iron welded together to form a rigid structure. The structure is mounted on rubber-tired wheels to permit mobility. Two hooks permit attachment to the feeding end of the press.

The *Times* operates a Hoe three-deck press, two plates wide. Roll widths of 33½ in. up to 36 in. width can be run. The rolls which are now being used at the *Times* are 12 in. wide and after splicing the web is 34½ in. wide with 1⅛ in. being used for the splice or pasting area.

At first it was necessary for the *Times* to run the spliced web on the middle deck with a 35 in. roll on top to cover up the 34½ in. spliced sheet in the middle, and a 33½ in. web on the bottom. In other words, a 33½ in. web could not be run at the top because it would be narrower than the 34½ in. web in the middle.

This was corrected several weeks after the machine was put into operation and Mr. DeLamar states that this spliced sheet is now led either to the top deck or to the middle, thereby eliminating the necessity for a 35 in. roll on the top deck. One edition of the *Times* was run using the top deck, and the carriers and the mailing room employees did not receive any complaints. The splicer job is done so expertly that the *Times* has not had one complaint from its 19,000 subscribers; neither have any of the advertisers complained that their ads were not as good when they were printed over the spliced part of the sheet.

The *Times* publisher feels that most any small newspaper plant could use something similar to his newsprint splic-

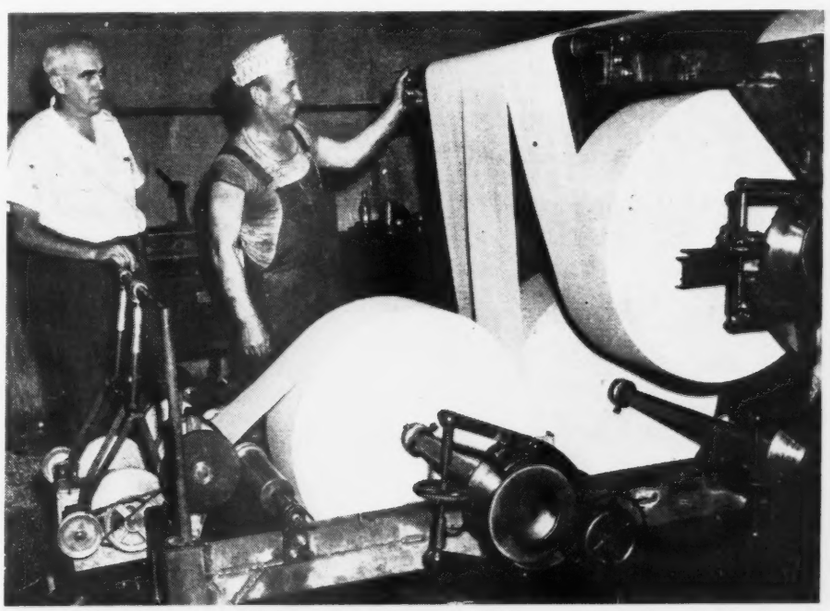


Fig. 1—View of DeLamar-Taylor newsprint web splicing mechanism in operation as attached to the Hoe 3-deck press in the plant of the Gadsden (Ala.) *Times*. The mechanism pastes three 12 in. webs together to form a 34½ in. wide web which is fed into the press in the regular manner after being spliced. At left is Publisher Curtis DeLamar and at right is Louis Taylor, Pressroom Superintendent. The frame of the device is constructed of channel iron welded securely together. It is mounted on rubber-tired wheels for mobility purposes. The attachment becomes a part of the feeding-in end of the press after two hooks have been fastened to the press frame. Normal press operating speed at the *Times* when using the splicing mechanism is 18,000 copies per hour. Note that each roll is provided with its own tension device.

ing device since the printing speed is not more than 18,000 to 20,000 copies per hour and since there would be a saving of 1000 to 1500 lbs. of paper per day.

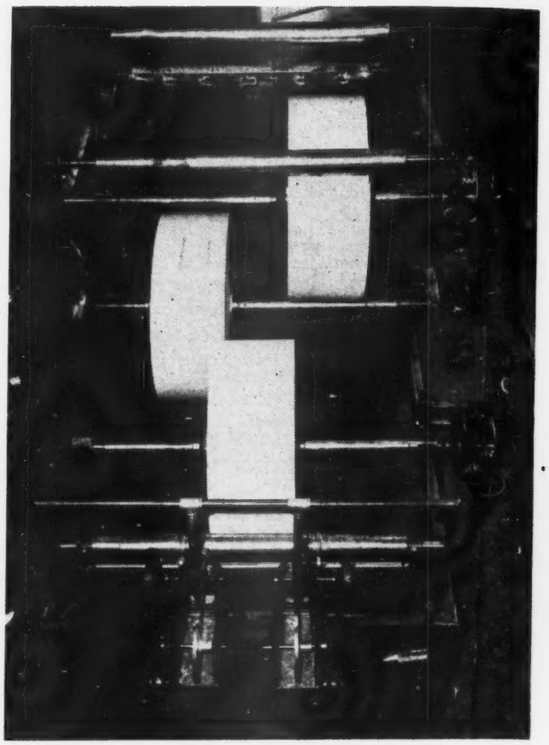
"It would be possible on papers of 10,000 or less circulation to use a paster on all three decks provided there is enough space at the end of the press to permit installing the three pasting units.

"In operating the splicing device, additional attention is required to see that the paste is distributed evenly on the 12 in. web edges before the three webs are joined together. Additional help is also required to look after the web tension."

"We can run 10,000 copies per roll at normal speed on one setup", states Mr. DeLamar, "without changing and when it is necessary to change rolls the change has been made in less than 5 min. and with the extra spindles, I estimate that the time can be cut to approximately 3 min. per change on the pasting machine".

Mr. DeLamar continued, "We have 'toyed' with every setup we could think of on the press and machine. Recently we ran our Saturday edition, which always consists of not more than 8 pages, on the paster alone by using the collector on the press. This required double press time, but the issue was run off in two sections of 4 pages each and the collector held the small pasted sections satisfactorily, thereby consuming only paper manufactured out of three short rolls".

Mr. DeLamar also stated that a 12 page collect edition had been run by using the splicer and one 17 in. roll on the bottom deck. This made it possible to run the whole edition with only the 17 in. roll being used out of the normal paper supply.

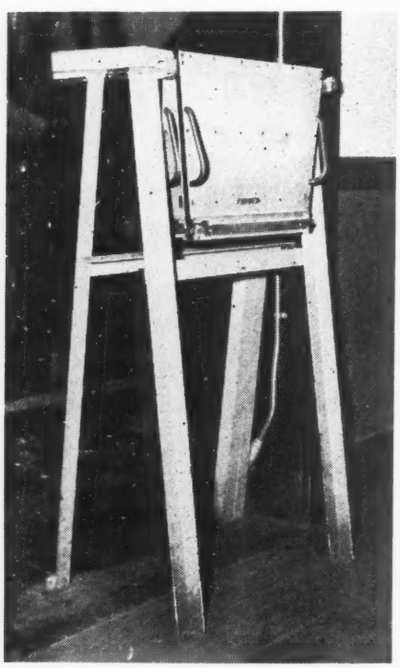


End view of DeLamar-Taylor newsprint narrow-roll web splicing device in pressroom of the Gadsden (Ala.) *Times*. This view is away from the feeding-in end of the press. The three rolls are aligned so that the edges of the two outside rolls will overlap the edges of the center roll approx. 1⅛ in. to provide a 34½ in. web width. At lower front are shown the two pasting mechanisms. The disks are rubber faced and run on a metal wheel that runs in the reservoirs and transfer the paste to the rubber faced disk. The center roll has paste applied to each edge and is led around and underneath before it joins the edges of the accompanying rolls. Pasting mechanism is driven through friction with the shaft extending across the lower part of the frame.

The extra lead from the paster to the press necessitated a few more waste papers each edition, but the number of waste copies per day has increased very little, according to Mr. DeLamar.

Handles for Linotype Splits

John W. Strange, Composing Room Foreman of the Olean (N.Y.) *Times Herald*, tells us about the fitting of lifting handles to Linotype split magazines in his plant. The handles, states Mr. Strange, facilitates handling the split magazines when changing them and makes work easier for the operator. It is obvious, of course, that with these handles, the split magazines can be used only in the top position, but adds Mr. Strange "that's how we use 'em." The *Times Herald's* Linotype machinist, Lee Johnson, secured some ½ in. round cold-rolled steel and bent it to the required shape. He drilled and tapped each end for 3/16 in. studs, drilled the magazine bars (and top plate) and applied the handles.



Form Craftsmen's Club

The Blue Mountain Chapter of Printing House Craftsmen held an organizational meeting recently in Walla Walla, Wash. Slim Meverden of Kennewick, Wash., was elected president. The club is affiliated with the Pacific Coast Conference of the Society of Printing House Craftsmen.

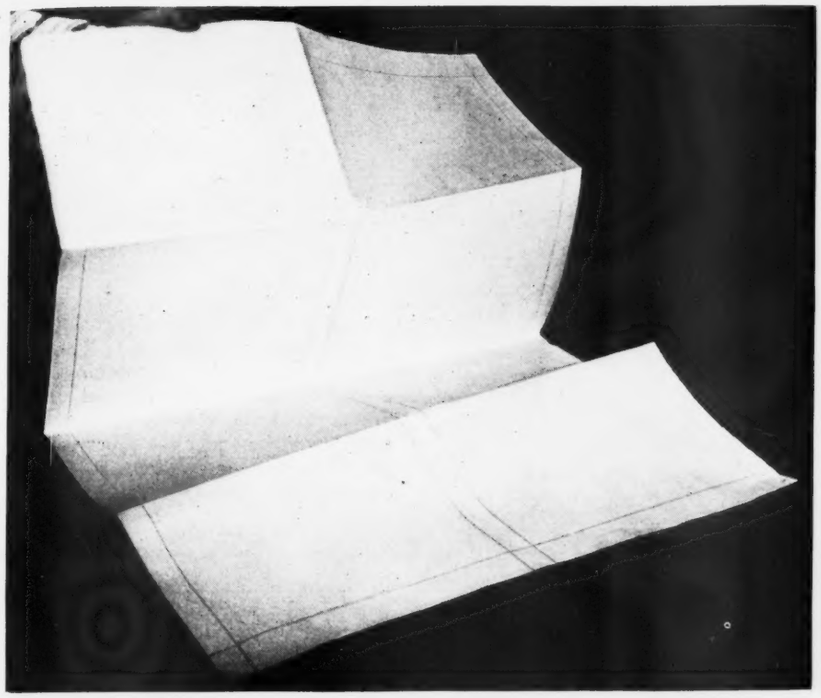
The principal speaker of the evening was Ronald Renny of Seattle, first vice president of the coast organization, and Tenth District Representative, Intl. Association of Printing House Craftsmen.

Other officers elected were Dale Ammerman of Freewater, Wash., vice president; Darrell Taylor, Walla Walla, secretary-treasurer. Members of the board of directors include Joe Merth, College Place; Paul Troeh, E. L. MacDonald, Ted Klassen and Harold Rimbey, Walla Walla; and Pat H. O'Neil, Dayton, Wash.

ANPA Program Committee

The committee in charge of the program for the 20th Mechanical Conference of the American Newspaper Publishers Association has been appointed by J. L. Stackhouse, Easton (Pa.) *Express*, Chairman of the Mechanical Committee, as follows:

Chairman: Edwin H. Evers, St. Louis (Mo.) *Globe-Democrat*, for composing room; M. A. Hagan, Philadelphia (Pa.) *Inquirer*, for engraving department; John J. Shea, Hearst Newspapers, New York, N. Y., for pressroom; T. A. Corcoran, Louisville (Ky.) *Courier-Journal & Times*, for mail room; John W. Park, Chicago (Ill.) *Tribune*, for stereotype room. The next Mechanical Conference will be held at Hotel William Penn, Pittsburgh, Pa., on July 19, 20 and 21, 1948.



McQuiddy Printing Co., Nashville, Tenn., in its college annual work, uses what is called a register sheet. It represents a time-saving element in production of this type of work. The register sheet is of the exact size of the sheet on which the annual is to be printed but of a different stock. This sheet is 60 lb. or 80 lb. offset paper because it is least affected by weather conditions in the plant. The sheets are ruled ahead of time on both sides in purple ink. Each side covers an 8 p. form. Sheets are ruled for four groups of two pages each with trim space between each group of two on two sides. Consequently, the register sheets show page cutline, fold line and trim line.

College Annuals

is Seasonal Work with Plenty of Problems

By JAMES CLYDE PORTER

SPECIALIZED printing is nothing new. All over the country firms specialize in one kind of work or another with varying degrees of success. But it is doubtful whether there is any specialized printing that has more problems connected with it than the printing of college annuals. And it is doubtful whether there is any specialized printing where there are fewer answers to the $64 questions this work presents.

In the first place, this business is very much of a seasonal affair. In the space of about two months it must be set up, cuts must be made, proofs corrected, forms made up, printed, bound and delivered. Unlike publication work that concerns itself with periodic issues such as a monthly, the college annual is a one-shot-a-year proposition. There is more than enough work to keep a bee hive busy when it is in the shop but after it is done there is a lull in this type of work for some 10 months until the frantic mess starts over again.

The college annual, which makes its appearance in the Spring, is a year book issued for the student to take with him when he graduates from college. It is a record of his years in college which means that it is filled with halftone illustrations and text matter. In some instances, there are advertisements. But at best (or should we say, worst?) it is literally bedded down with cuts.

The work is obtained, in the most part, from people who know little about printing, which suggests all sorts of headaches to the average printer. It is really surprising how many impossible things a person who knows nothing about printing can think up just as it is also surprising how extremely difficult it is for a printer to explain why these impossible things cannot be done. That is one of the headaches of the college annual business.

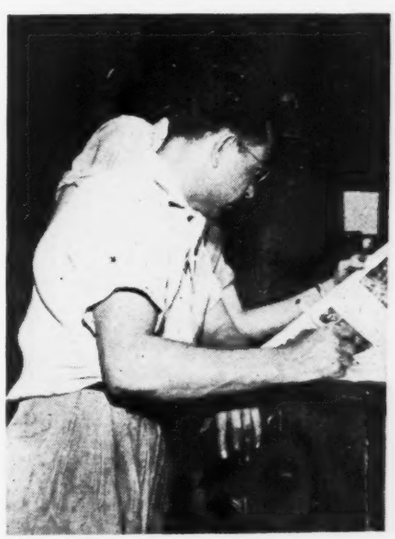
All of the headaches, however, do not originate in the other fellow. There are plenty of them bred and born in the job itself. For instance, there is the question of size of editions. For the smaller college the edition will run from a low of around 400 copies to perhaps no more than 500 copies. The larger college may get out an edition of from 1000 to 1500. But between these two extremes, neither of which is any too attractive, there are some small colleges that won't require an edition of over 150 copies. Especially is this true of a county high school, many of which follow the example of the college and issue annuals. Whether the edition is large or small it will be literally peppered with halftones so that from a printing point of view it presents problems in the pressroom.

On the average form there may be two hours or more of makeready on the press to get the form ready for a run that won't be longer than 15 min. Every printer knows what this does to hour profit on a press and he also knows how difficult it is to justify to someone who doesn't know much about printing why the high charge for makeready.

With the forms bedded down with numerous halftone cuts, it naturally follows that the ink used as well as the paper must be of good quality. Only the best halftone ink will do for the job and only the best grade of enamel paper can be used if justice is to be done to the halftones. This is just another of the many headaches for which there doesn't seem to be any typographic aspirin.

There are only about two factors that make this work attractive. One is that it pays well. It must pay well because of the disparity between running time on the press and time consumed in other operations, such as composition, makeready and so on. Another advantage that might not always be an advantage, depending on the other work done by the same printing firm, is that this work comes in the spring which is a time some printing firms are less busy than in the fall.

Just what firms who do considerable of this work have been able to work out to take some of the curse out of it is difficult to say. After discussing the work with printers over the country who do this type of work, few suggestions have been picked up that might pass as worth while remedies for the problems that the work poses. Perhaps the best suggestion



Checking over sheet for college annual before press run in plant of McQuiddy Printing Co., Nashville, Tenn.

comes from Ross Moores, Pressroom Foreman of the McQuiddy Printing Co., Nashville, Tenn.

"One thing we have insisted on," says Mr. Moores in discussing the college annual proposition, "is that we have stressed and insisted on standardization, concentrating on three sizes with the bulk of the college annual work that we do limited to one size. The three standard sizes we follow are 7¾ in. by 10½ in., 9 in. by 12 in. and 7¼ in. by 10 in. Of these three sizes, we do the bulk of the college annuals in the 7¾ in. by 10½ in. size.

"By limiting sizes to just these three and also by concentrating on one size as much as possible we are able to effect some economies on the press that do help. In running these college annuals we make it a rule to run an entire book on the same press and use the same size chase for locking up all forms for the same book. By doing this we have only to adjust the blocks on the bed of the press for the first form. Then by leaving these same blocks there we can put on a new form without having to bother with blocking it.

"We are able to do this because we always use the same size chase for the different forms and lock up each form in the same relative position in the chase with the same size and quantity of furniture in the same place.

"We use what is called a register sheet in our college annual work which effects about the only saving in time that I have ever been able to work out. These register sheets are of the exact size of the sheet on which the annual is to be printed but of a different stock. After considerable experimentation I found that a 60 lb. to 80 lb. offset paper was least affected by weather conditions, so I settled for that. These register sheets are ruled ahead of time for each annual. They are ruled on both sides and each side covers an 8 p. form. They are ruled for four groups of two pages each with trim space between each group of two on two sides. Thus these register sheets show the page outline, the fold line and the trim lines.

"The makeup man uses one of them to make up his forms so that each form is made up exactly like every other form for the same annual and with the least expenditure of time. The lockup man works with the same register sheet, justifying the lockup with the register sheet so as to make certain that spacing is strictly according to the register sheet.

"The register sheet goes with the form to the press where the pressman uses it for registering on the press. By this means, a considerable saving in time is effected without sacrificing quality of work.

"Then when the forms come off the press the same register sheets go to the bindery where they form a guide for setting the binders. Thus all through the makeup, the actual running and the binding these register sheets serve as a guide. They are much better than an actual printed sheet from the run because of the fact that the paper on which these register sheets are ruled is least affected by weather conditions."

Gravure Research Program at Battelle

CONTRACT arrangements for a five-year program of research on problems of the gravure printing industry have been made between the newly organized Gravure Research, Inc., and Battelle Institute, Columbus, O.

The contract, involving the expenditure of $125,000 for research, was signed on September 9 at the first meeting of the Board of Directors of the new research corporation. At the meeting, M. George Martin, Standard Gravure Corp., Louisville, Ky., was elected president of Gravure Research, Inc. Len S. Pinover, Intaglio Service Corp., New York and Chicago, was elected first vice president; and W. H. James, The News Syndicate, Inc., New York, N. Y., secretary-treasurer.

Gravure Research, Inc., is a research organization of 14 member companies, all of which are connected with the processing or printing of newspapers, magazines, and direct mail by rotogravure processes. The organization is incorporated under the laws of the State of Illinois as a nonprofit corporation.

The five-year research program will get under way in the laboratories of Battelle about November 1. The first efforts will be an investigation of all phases of the preparation and use of gravure carbon tissue. Research investigations will be under the supervision of Dr. R. M. Schaffert and Dr. D. J. Byers of Battelle's Graphic Arts Research Division.

Paper and Printing Ink Courses

Three courses in the paper and printing inks field are being offered during the fall term by the Division of General Education, New York University's school for adults, the course began September 24. The Survey of Pulp and Paper, Printing Inks, and Printing Processes given last year as supplemented by a new lecture series in the Manufacture and Conversion of Paper Board. The courses meet in evening sessions at the Barbizon Plaza Hotel, 58th St., and 6th Ave.

Harold M. Annis, Staff Production Manager, Oxford Paper Co., again conducts the Survey of Pulp and Paper. This course consists of 15 lectures given by leaders in the pulp and paper industry and presided over by Mr. Annis. It meets Wednesday evenings from 6:15 to 8:00 p.m and began September 24.

Henry J. Howlett, Secretary of the American Management Association, is moderator for the new course in the Manufacture and Conversion of Paper Board. This course consists of 15 lectures given by experts in the paper board industry and meets on Tuesday evenings, and began September 30, from 6:15 to 8:00 p.m.

The 15 lectures in Printing Inks and Printing Processes are conducted by Dr. William Hodgkiss of the Sun Chemical Corp. The course meets on Tuesday evenings from 6:15 to 8:00 p.m. and began September 30.

Information about registration may be secured from Sidney G. Roth, in Charge of Technical Program, Division of General Education, New York University, 100 Washington Sq. East, New York 3, N. Y.

Organize Missouri Mechanical Conference

The Missouri Newspaper Mechanical Conference was organized in Columbia, Mo. on Sunday, July 13. The purpose of the organization is to meet semi-annually or annually to discuss problems arising in the mechanical production of newspapers. The first meeting will be held Saturday and Sunday, November 8 and 9 at Hotel Bothwell, Sedalia, Mo.

Officers of the Missouri Conference are: President, Beryl A. Troutman, *Courier-Post*, Hannibal, Mo.; Vice President, Paul S. Ginn, *Democrat* and *Capital*, Sedalia, Mo.; Secretary-Treasurer, O. K. Hammitt, *Monitor-Index*, Moberly, Mo.

Two New Litho Clubs

President Wm. J. Stevens of the National Association of Litho Clubs announces the formation of two local clubs in Cleveland and Boston, making a total of 15 local clubs in various parts of the country.

On September 8, the Cleveland club was formed with 77 members. Wm. C. Stone, Production Manager of Copifyer Litho Corp., was elected president; Secretary-Treasurer is H. H. Johnson of Reserve Litho Co.

The Boston club was formed on September 10 with 210 members at Hotel Gardner. President is Edward W. Harnish of Tichnor Bros.; Secretary is Joseph N. Ulrich of Spaulding-Moss Co., and Douglas F. Reilly of Buch Printing Co. was elected Treasurer.

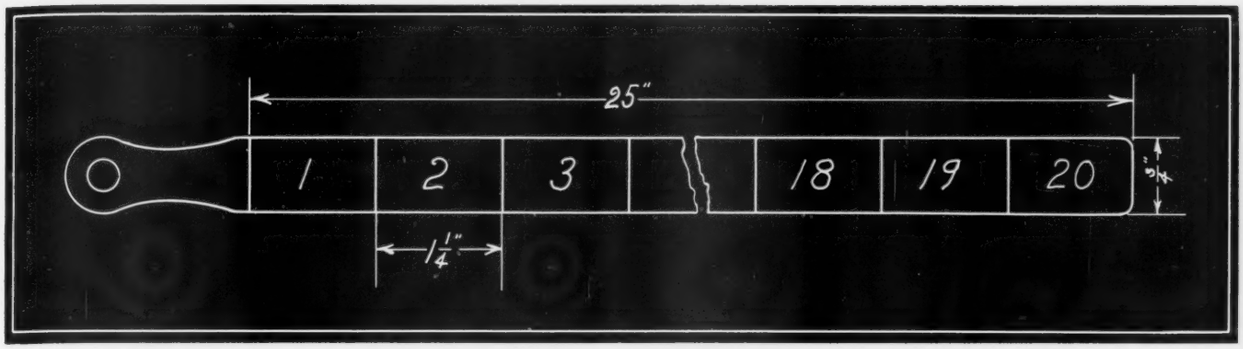
Wm. H. Wood, Director of Research, Harris-Seybold Co., addressed the Boston organization meeting on the subject: *This Age of Science*.

National President Stevens installed the new officers in both the Cleveland and Boston clubs which will meet monthly.

NAPL Convention

The National Association of Photo-Lithographers will be held in the Book-Cadillac Hotel in Detroit, Mich., October 22 to 25 inclusive.

Featured among the 56 exhibits will be a 22 by 34 offset press, several cameras, folding machines, complete platemaking equipment, a new color matching lamp, lithographic inks, chemicals, rollers and dampener covering materials, film lineup tables and darkroom equipment.



Gauge for Measuring Matrices in Line-Composing Machine Magazine Channels—Anthony J. Stanzione, Linotype Machinist with the Williamsport (Pa.) *Grit*, sent to *Printing Equipment Engineer* the accompanying diagram in which is illustrated a matrix measuring gauge for determining the number of matrices in magazine channels on Intertypes and Linotypes. The gauge in general corresponds to the dimensions of the matrix body. It is ¾ in. wide by 0.025 in. thick so it can be slid down any magazine channel. The divisions are marked 1¼ in. apart. The entire length of the measuring section of the rule is 25 in. exclusive of the handle. As is well known, there are 20 of the most used matrices in certain channels. By sliding the rule down the channel, the number of matrices may be instantly determined by referring to the figure at which the rule is stopped. The rule may be used in magazines irrespective of whether they are on or off the machine. Mr. Stanzione constructed his rule from brass. If steel is used, all corners and edges must be rounded to prevent damaging the magazine channels.

Shown in miniature is the front cover of Harris-Seybold's annual report which was printed throughout by offset, in several shades of green with white (unprinted stock) lettering.

H-S Annual Report

The Harris-Seybold Co. reports for the fiscal year ending June 30, 1947, net sales of $11,890,672. With the exception of a minor amount of remaining war products the shipments were regular peacetime products. Net earnings after taxes amounted to $960,292, equivalent to $6.47 per common share of stock.

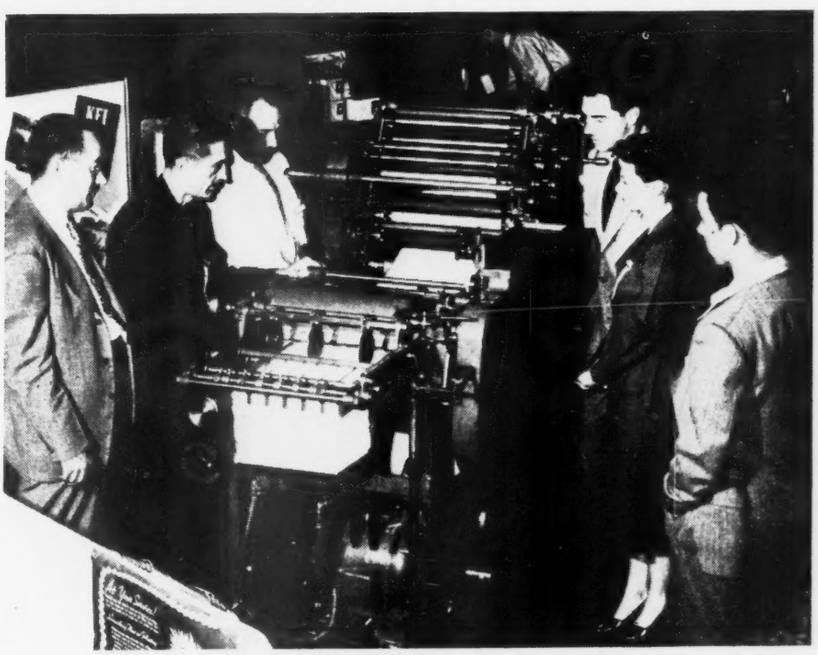
In the report it is stated that equipment now in production for shipment during the year includes the larger size offset presses which will be available in one, two and four colors. A small offset press has been newly designed and preproduction models are now being made. An hydraulically operated multiple spindle paper drilling machine is in the early stages of manufacture for shipment during the coming year.

War Orphan Wins Prize

Miss Lisa Bauer of San Francisco, Calif., an 18-year-old war orphan, won 13th place in the Annual IPI Essay Contest. The contest was sponsored by the National Graphic Arts Education Association in cooperation with International Printing Ink. Miss Bauer was in this country less than four months when she entered the contest in competition with more than 6000 high school students in the United States and Canada. The subject of her essay was *How a Free Press Promotes International Understanding*.

Great Lakes Conference Dates are Changed

At a meeting of the Board of Directors held in Toledo, O., on Sunday, September 21, it was decided to change the meeting dates of the 1947 Great Lakes Mechanical Conference from October 25, 27 and 28, 1947 to January 18, 19 and 20, 1948. The conference will be held at Pantlind Hotel, Grand Rapids, Mich. The reason for making the change in conference dates, it was explained by President Deo A. Padgett, is that mechanical executives will be more free to get away from their duties at that time. During the fall and early winter months, mechanical executives are busily engaged in producing heavier newspapers.



The Aldine Printing Co. displayed a web offset jobber in actual operation at the Fourth Annual California Industrial Exposition in Los Angeles. The press is manufactured by R. Hoe & Co., Inc. and is adaptable to one-color letterheads, business forms, inserts and similar small jobs. Shown behind the press from left to right: George Carnegie, assistant manager, Hoe's offset press div.; Charles Miller, pressman: and Harold Feinstein, president, Aldine Printing Co.

Shown with J. S. Mertle (center), Technical Director of Kemart are Duff A. Murnik (right), president of the Northern California Photo - engravers' Association, and president of the Oakland National Engraving and Gravure Co.; and Frank P. Adams (left), president of Kemart Corp.

Joins Kemart

Announcement is made by Frank P. Adams, president of Kemart Corp., that J. S. Mertle, F.R.P.S., F.P.S.A., internationally known authority on photomechanics, will serve as technical director of the concern.

The Kemart Corp., with offices at 701 Sansome St., San Francisco 11, Calif., was organized to develop and introduce processes of halftone reproduction invented by Burtt L. Berry. These processes are based on the principle of employing fluorescing originals. They aim not only at the introduction of automatic highlight effects, but also improved rendition of tones and detail in halftone images by any process.

Berry, a pioneer researcher in the field of luminous pigments, spent a number of years in devising and designing special surfaces and materials for the preparation of drawings and photographic originals. He also invented special apparatus for lighting such originals on process cameras. This apparatus takes the form of auxiliary camera lamps, which are used in conjunction with any regular type of camera illuminant.

The special lamps emit purple light, which activates the specially prepared originals, causing them to glow or fluoresce during the supplementary exposure given in the Kemart procedure. This fluorescence affects the photographic negative material in direct ratio to the tonal range and gradation of the original.

The processes are said to be simple in nature. Aside from the supplementary exposure with the special lamps, they require no departure from regular procedure on any type of process camera.

ATF Rule Booklet

AMERICAN Type Founders has announced printers' brass rule and accessories are again available, in limited quantity. ATF has a 32 page booklet listing all varieties of its Duratin composing machine formula and brass rule, including a wide range of points in single, multiple and linear faces, dots, hyphens, bevels, graduations, creasing and perforating; and accessories such as plain and interlocking mitered corners, squares, corner quads, circles, ovals, round corners, braces, thin spaces, etc. The booklet is available from any ATF branch office.

International Craftsmen Meet at Saratoga Springs—While not one of the largest conventions in point of attendance (approx. 700) everybody had a good time. Representation from widespread Craftsmen's Clubs was noticeable. All identifications of Craftsmen in accompanying pictures are from left to right.

1—William H. (Bud) Griffin, Immediate International Past President; J. Homer Winkler, Chairman Educational Commission; Hon. A. E. Giegengack, U. S. Public Printer; John Reay, International Representative-at-Large.

2—Irving Peck, Past President, Newark (N.J.) Club; Basil M. Parsons, Thomson-National Press Co.; J. A. Waryn, Past President, Newark (N.J.) Club; Fred A. Travelena, Chairman, Membership Committee, New York Club, and New York Manager, Charles Eneu Johnson & Co.

3—Harold Crankshaw, Secretary, Washington Craftsmen's Club, and John Deviney, Deputy U. S. Public Printer, Washington Club.

4—Homer F. Sterling, Carnegie Institute of Technology, Pittsburgh, Pa.; Alex J. Alberg, Manager, Printing Div., Unity School of Christianity, Kansas City, Mo.; Laurance B. Siegfried, Syracuse (N.Y.) University.

5—W. H. (Bill) Brisbin of Cedar Rapids (Ia.) Club. Said he was only representative of Waterloo (Ia.) Club; also stated permission has been received from International to organize the Cedar Rapids Club. In center is Gailard Huhn — paper man — of Cedar Rapids Club. At right is the well known Frank Z. Keating of the Des Moines Club; he is Superintendent of Printing, Bankers Life Co., Des Moines.

6—David Schulkind, President, E. P. Lawson & Co.; E. G. Williams, President, American Type Founders, Inc.

7—Paul Twyman, Chicago Club and Asst. Sales Mgr., Miehle Printing Press & Mfg. Co.; Charles Gainer, Composing Room Supt., Intl. Harvester Co., Chicago; Mr. Gainer also was appointed Chairman of the annual caucus meeting always held by the delegates to see "who's who" for the coming year in the official family; Charles R. Rothfus, Chicago Club, and IPI Representative; striding happily toward this group at right is Russell Olander, Editor, *Share Your Knowledge Review*.

8—Ralph Robbins, Albany Club and Plant Engineer, The Maqua Co., Schenectady, N. Y.; Elmer Benny, Second District Representative, member New York Club, and Representative of Ideal Roller & Mfg. Co.; Arthur E. Murphy, Chicago Club and Representative, Ideal Roller & Mfg. Co.; M. Hugo Lindberg, New York Club and Eastern Manager of Printing Machinery Co.; Gus Reishel, New York Club and Ideal Roller Co. Representative.

9—John Breteler, Martin Printing Co., Cleveland; Mrs. Adam Henri Reiser, New York; Adam Henri Reiser, New York Club, and Assoc. Editor, *Printing Equipment Engineer;* Wm. Feather, jr., Manager, and William Schneider, Pressroom Supt., William Feather Printing Co., Cleveland.

10—Apprentice Clinic (Monday afternoon, Sept. 1). Laurance B. Siegfried, Syracuse (N.Y.) University; S. Preston Hipsley, Director Personnel, U. S. Government Printing Office; A. Gordon Ruiter, Chairman; Chester Morey, Apprentice Training Service, Dept. of Labor, Boston, Mass.

11—Charles Smith, Newark (N.J.) Club, and Representative of Lanston Monotype Machine Co.; Richard (Dick) Seymour, Albany Club and Representative, Mergenthaler Linotype Co.; Mr. Seymour also was Chairman of the Transportation Committee for the Convention which carried many out-of-town Craftsmen to and from Albany and other points thus relieving long waits and pleasing the visitors; Walter A. Waterbury, jr., Albany Club, also associated with Austin-Empire Engravers, Inc.; M. Weston, Albany Club, also associated with Fort Orange Press, Inc.

12—Carl Westhelle, Treasurer of New York Club and Superintendent of Morris & Walsh Typesetting Co.; R. Randolph Karch, New York Club, and Director of Typography, Intertype Corp.; Michael R. Stevens, New York Club and General Manager, John E. Weiss & Sons; Charles Trapp, New York Club and Treasurer of Whittaker-Trapp Co.; Wm. L. Osborn, New York Club and Eastern Manager, *Printing Equipment Engineer*.

13—James Ross, Consolidated Litho, Montreal; Richard W. Gardner, Graphic Arts Sales Div., Eastman Kodak Co.; Joseph Lutz, Supt., Advance Electrotype Co., Indianapolis, Ind.

14—It's Cleveland in '48. Here are some of the Cleveland Crafts men attending the Saratoga Springs convention to extend invitation for next year's convention. (Left to right): Sidney Langford-Cleveland Manager, Sugmund-Ullman; John Breteler, The, Martin Printing Co.; Robert Pettet, Superintendent, The Caxton Co.; Wayne Gaspar, Superintendent, R. E. May, Inc.; Chester L. Klien, Production Manager, Printing Dept., The Sherwin-Williams Co.; D. M. Oldfather, The Schaefer Printing Co.; the Great Profile (Oldfather's) may be seen in the mirror at rear of Langford; Wayne Stetson, Manager, Cleveland Convention and Visitors' Bureau.

15—Section of Cleveland table at Wednesday night's banquet (left to right): Finfering ear and gaping at Montreal table is D. M. Oldfather; next is Sidney Langford, next are President of the Cleveland Club Chester L. and Mrs. Klien.

16—Addis Dempsey, Vice President, Donovan & Sullivan Photoengraving Co., Boston; John L. Reay, International Representative at Large, Columbus, (O.) Club.

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1946-1947 Board of Governors for Intl. Assoc. of Printing House Craftsmen Meets at Saratoga Springs—While convention delegates nosied 'bout the Grand Union Hotel, the Intl. Board of Governors met to deliberate upon Association affairs. Shown here in one of the executive sessions are (seated clockwise around the table): J. Homer Winkler, Chairman, Educational Commission; John L. Reay Representative-at-Large; Russell J. Hogan, Third Vice President; Edward T. Samuel, Treasurer; Herman Slater, Chairman, Research Commission; President, Wm. H. (Bud) Griffin; Executive Secretary, Pearl E. Oldt; Ninth District Representative (Texas) Charles B. Weimer; First Vice President, A. Gordon Ruiter; Second Vice President, Gradie Oakes.

(Standing clockwise about the table): Immediate Past President, H. Guy Bradley; Fourth District Representative, C. R. (Mac) McClure; Chairman, Publications Commission, Russell J. Olander; First District Representative, John R. Donohue; Past Secretary and Thirteenth District Representative, Herbert Threlfall; Fifth District Representative, Ollie G. Fricke; Chairman, Public Relations Chairman, Gordon Holmquist; Eighth District Representative, G. Stuart Braznell.

Glycerine in Printers' Rollers

By MILTON A. LESSER, B.Sc.

THE best proof of the importance of glycerine to the printing industry, mathematically speaking, is the government report that in 1942, the last year for which official figures are available, 5,169,000 pounds of this fluid were consumed in the manufacture of rollers and supplies. Although these figures[1] do not show exactly how much glycerine went into roller production, there is no question but that it was a most substantial proportion.

Although it finds some use in other types of printing ink rollers, glycerine plays its major role in the formulation of glue-glycerine rollers. Despite newer developments, the composition glue-glycerine type of roller is undoubtedly the most used and the best known. Not so long ago, as the result of an extensive survey and study, Trotter[2] reported that the composition roller is still generally acknowledged the best printing roller under favorable speed and atmospheric conditions. An exception is the case of larger newspapers, where rubber rollers are said to give superior results on the high-speed presses. With this exception, it was said that the composition roller remains the standard by which all others are judged. Moreover, the glue-glycerine composition roller is being steadily improved to meet new speed conditions and other changing factors.

Glycerine is a unique substance in that its rare combination of physical properties permit its use for so many different purposes. Several properties of glycerine are utilized in roller manufacture, the most important being its plasticizing effect and hygroscopic action. Without glycerine the glue would become hard and brittle; drying to hard, glasslike pieces that would render the roller useless for transferring ink.[3] With glycerine as a plasticizer, the composition remains soft, pliable, and resilient.[4] This plasticizing action is intimately associated with glycerine's hygroscopic effects or moisture-attracting action. The ability of glycerine to attract and retain essential moisture, through which it keeps the roller tacky, is also one of its major advantages.[5] Moreover, because of its high boiling point and low vapor tension, glycerine "stays put" and does not evaporate away. Its well known ability to resist freezing is also an important consideration under certain circumstances.

It is not surprising, therefore, that glycerine has been called "the all-important ingredient of the glue-glycerine roller.[6,7] During the war, when glycerine was diverted to essential military needs, a number of substitutes were tried, but none was found able to replace it completely in composition rollers.

Like many other developments in the printing industry, the origin of glycerine usage in printers' rollers is rather obscure. A number of people have claimed credit for this important advance. There is no question, however, that a major forward step toward fast printing was the power driven, cylindrical inking rollers, made of glue and glycerine, which carried the ink in smooth distribution to the type.[8]

According to Kilheffer,[3] the idea for a suitable composition for the inking roller came from the ceramic industry where designs were transferred to pottery by means of a glue and molasses roller. Such rollers were used by printers for many years. While satisfactory in many respects, their life was short and this was especially true in dry weather, when the glue would dry out and harden. A great change for the better came with the addition of glycerine which retarded drying.

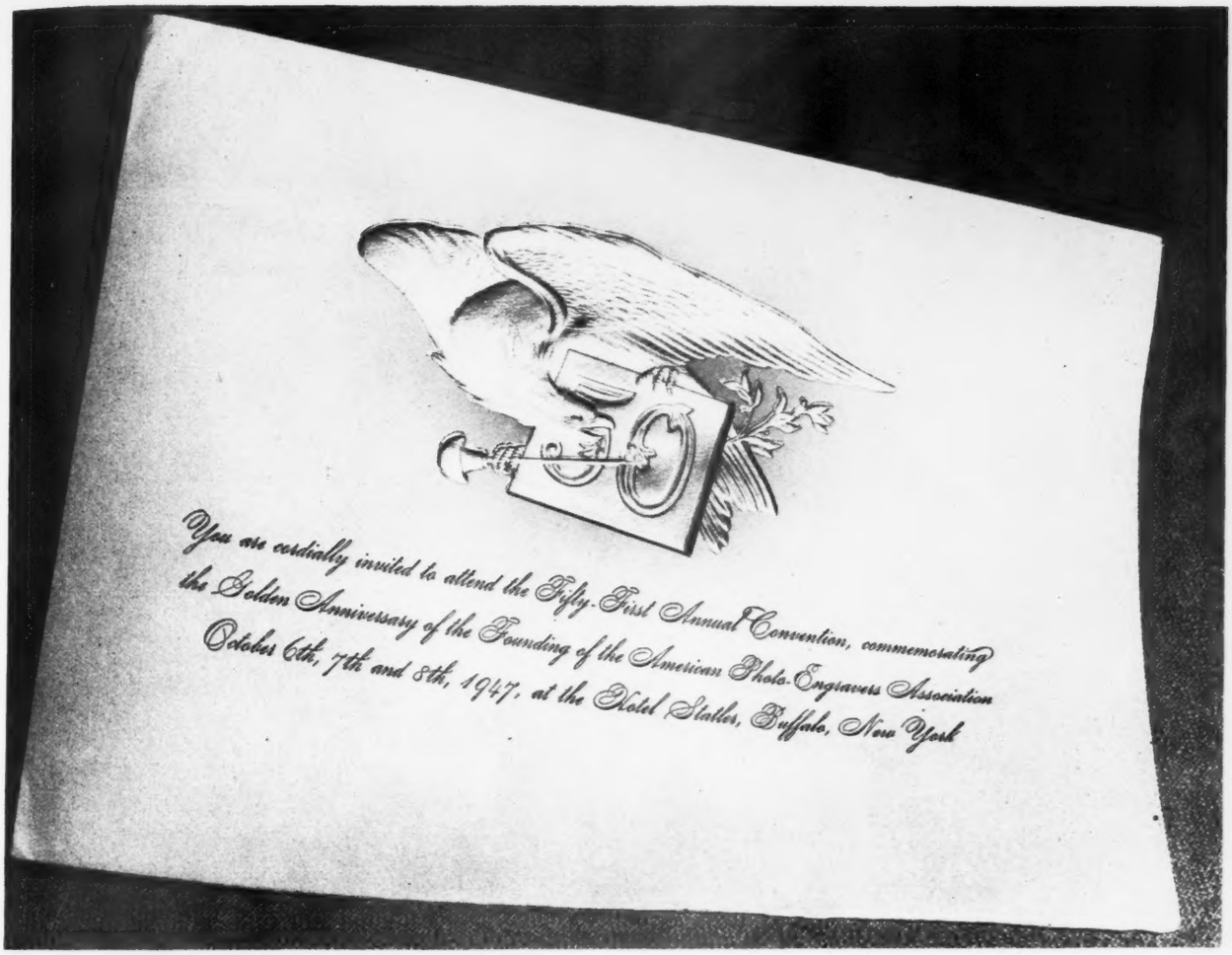
In the many years that have passed since this discovery, numerous modifications have been suggested, but the modern composition roller is still based on various mixtures of glue and glycerine. Other materials are frequently added, like borax, caster oil, waxes, and varnishes. Some additions are held as trade secrets by individual roller manufactures, but frequently such inclusions are divulged in patent specifications.

The proportions of glue and glycerine are changed for the so-called Winter and Summer rollers. In extremely dry, warm air, a glue and glycerine roller will shrink and harden. In extremely moist air, the roller will absorb moisture, swell, and become soft and water-logged. For these reasons rollers contain less glycerine for the summer when the pressroom humidity is often extremely high and more glycerine in the winter when artificial heat keeps the air dry.[3]

Trotter's[9] survey indicates that March and April are the favorite months for ordering Summer rollers. September is a slight favorite over October for the ordering of Winter rollers. However, a large number of printers believe that rollers can be ordered at any time, while another group favor placing orders from three to eight weeks in advance of the time they are to be used. In the opinion of this authority,[5] these rollers should be renamed "warm-weather" and "cool-weather rollers" because "the weather man is notoriously ignorant of calendars."

In the classification of composition rollers also belong the types known as non-meltable rollers and coated rollers. Non-melt rollers, in addition to the usual glue and glycerine bases, contain hardening or tanning agents which toughen the composition and raise its melting point. Coated rollers have a thin coating of composition over a rubber base securely fastened to the stock.

When rollers were first used in printing, a mold was furnished with each press and the pressman cast his own. Suitable materials were supplied to the trade and seasonal rollers were made by variations in the amount of glycerine. In 1826, precast rollers were made available to American printers by a New York firm. Later rollers were cast by the so-called Gatling Gun Process. This obviated the formation of small pits from air bubbles


You are cordially invited to attend the Fifty-First Annual Convention, commemorating
the Golden Anniversary of the Founding of the American Photo-Engravers Association
October 6th, 7th and 8th, 1947, at the Hotel Statler, Buffalo, New York

Perhaps if all printed matter were of super quality, all of us would lose our enthusiasm for it. Neither would we experience the thrill which does come with receipt of an outstanding piece of printing. These remarks prelude comment upon the invitation recently extended by the American Photo-Engravers Association convention which was held in Buffalo, N. Y., on Oct. 6, 7 and 8. The de luxe invitation was issued in commemoration of the Golden Anniversary of the Association.

The invitation is printed on heavy white rough-wove stock, four pages french fold, size 17¼ in. wide by 12¾ in. high. The eagle emblem shown in the accompanying miniature illustration is 9 in. wide. Pure gold leaf was laid on the stock and afterwards heavily embossed with a brass die.

The headings for the cover and page 3 are approx. 60 pt. Spencerian Script in use a half-century ago. The 12 pt. type, set approx. 12 pt. on page 3, 32½ picas wide, was hand-set in John Bell which was cast in England by Stephenson, Blake & Co., from the original matrices. The illustration on page 2 of the invitation represents the interior of a photo-engraving plant in New York about 50 years ago. The drawing was done on scratchboard and was copied from an old wood cut. A similar smaller illustration of the gold eagle on page 1 appears on the fourth page of the folder and is a line reproduction of a crayon drawing.

All type matter in the invitation is printed in black as are the illustrations. A green tint (fill-in type) enhances the value of the engraving plant on page 2, the initial on page 3 and the eagle emblem on page 4.

The design is by Robert W. Washbish. The printing was done by Taylor & Taylor. Both designer and printer are located in San Francisco.

This printed piece is an example of the desirability of Graphic Arts people using fine printed matter in the promotion of their profession. We hope more printing firms will see fit to follow this outstanding example for the promotion of their business.

by forcing the glue and glycerine composition into the bottom of the mold under pressure. In modern methods the composition is forced into vertical molds, after the molds have been oiled and the cores centered in them. After the melted composition has cooled and hardened, the rollers are removed and trimmed if necessary.

Many formulas for making glue and glycerine compositions are available in the technical literature. In addition new developments are described in patents. In many cases the patent specifications describe the advantages to be gained by adding various substances to the basic glue-glycerine mixture,[10, 11, 12] but in some instances the patents[13, 14] give mechanical procedures for making improved composition rollers.

According to one authority,[15] a typical, basic mixture for making composition printers' rollers contains:

Glycerine	40 parts
Gelatin	53 parts
Water	7 parts

In such a formula, the glycerine content may be varied from 30 to 80 parts to produce a hard or soft roller. Gelatin, being a highly purified product, is fairly expensive. Hence, hide glue is more commonly used. This is illustrated in the following formula[16] for composition lithographic rollers, which are cheap to make but give satisfactory performance:

Hide glue	30 parts
Glycerine	65 parts
Water	60 parts
Borax	1 part

Non-melt compositions for making printers' rollers are obtained by adding chromates, formaldehyde or other hardening compounds to the glue-glycerine mixtures. European studies[17] have shown that the addition of tannins is without effect on the melting point of the basic mixtures. The addition of the hardening agents serves to prevent the regular compositions from melting down under adverse conditions and particularly on fast presses.

(*Continued on Page 72*)

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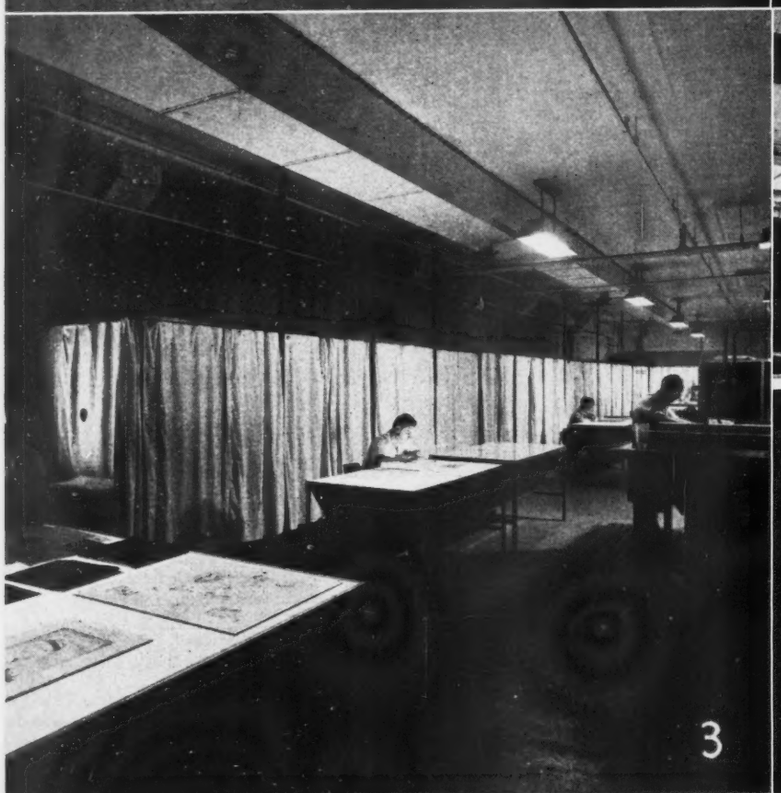

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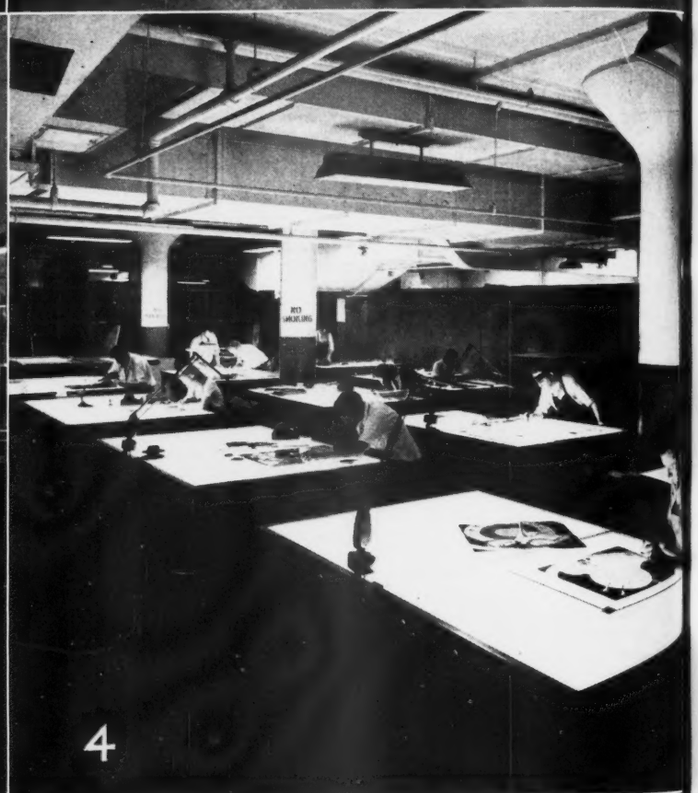

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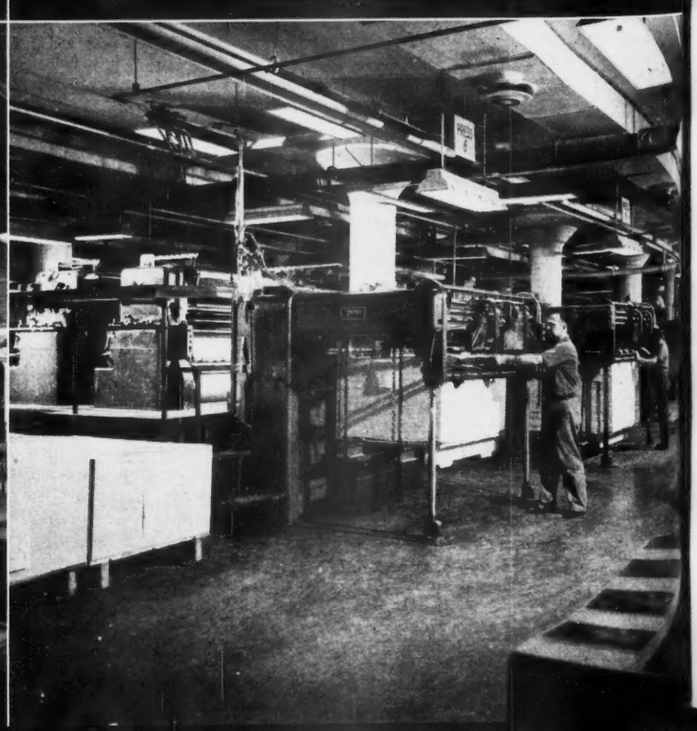


Imposing

is the word for elegant new building which houses Newman-Rudolph Lithographing Co. in Chicago

An imposing nine story tower rises above the entrance of Newman-Rudolph Lithographing Co.'s new building in Chicago. The building is one of the most modern, and probably the first, post-war structures for the production of offset lithography to be built in the nation. The exterior is of face brick, granite and stone.

THE new Newman-Rudolph building, housing the plant of Newman-Rudolph Lithographing Co., located on the corner of Van Buren and Jefferson Sts., in Chicago's industrial near West side, dominates an entire block along the proposed Congress St. Superhighway planned for the future. This ultra-modern structure was designed by Friedman, Alschuler & Sincere, Chicago architects and engineers. Its classic interiors were created by James Eppenstein, of Eppenstein and Schwab, also of Chicago.

Newman-Rudolph manufactures what it terms "printed merchandise." The company specializes in production of school texts, juvenile books, publication covers and maps. Large quantities of mail advertising are also handled. The entire mechanical setup is for the efficient production of large volume business.

The exterior of the four-story building is face brick, stone and granite with an imposing nine story brick and stone tower rising above the entrance. Overall dimensions are 191 ft. by 281 ft., each floor covering 53,433 sq. ft., with a total volume of nearly 4 million cu. ft. Built of reinforced concrete on floating foundations, the building is free of any sway or vibration caused by the heavy printing presses.

From the basement up, it reflects the latest designs for increasing efficiency in manufacturing. Heated pipes are embedded in the floor of an unloading ramp which leads into the basement stock room. This ramp is kept entirely free of ice or snow in winter by Prestone which circulates through the pipes. On the first floor are located the many presses including single, two-color and four-color units.

(*Continued on Page 74*)

Views in new plant of Newman-Rudolph Lithographing Co., Chicago. The company produces a number of products — all by offset-lithography.

Spaciousness, soft colors and comfortable furnishings make the reception room of the new Newman-Rudolph Lithographing Co.'s building attractive and relaxing. The large circular mural is illuminated with indirect lighting.

A dark brown carpet and colorful rust, brown and cream draperies match the furnishings in Mr. Newman's office. Both furniture and woodwork are of straight grained American Walnut in natural finish. Adjoining Mr. Newman's office is his personal living room.

Artists work in air-conditioned comfort in Newman-Rudolph Lithographing Co.'s new building. They have their own cubicle where they match colors on negatives from transparencies.

Above are strippers in the plate-making department of Newman-Rudolph Lithographing Co.'s new building. This department has the largest original plate-making capacity in the middlewest.

The plate-making department of the new Newman-Rudolph building is equipped with modern cameras and special built-in dark rooms. Hundreds of sets of color plates are made here each year.

Some of the single, two-color and four-color presses in the new Newman-Rudolph building. Between 250 and 300 million color impressions a year are produced by Newman-Rudolph. Floating foundations eliminate any sway and vibration due to the many heavy presses. In the pressroom there are 4 four-color presses, 6 two-color presses, and 1 one-color press. These consist of 3 Harris four-color, 50 in. by 68 in.; 2 Harris two-color, 50 in. by 68 in.; 2 Miehle, 46 in. by 67 in., and 1 Miehle one-color press.

Conference Dates

(with organization names and principal officers.)

American Photo-Engravers Association — Louis Flader, Commissioner, 166 W. Van Buren St., Chicago 4, Ill.

ANPA Mechanical Conference—William Penn Hotel, Pittsburgh, Pa., July 19, 20 and 21, 1948. J. L. Stackhouse, Chairman, Easton (Pa.) *Express;* Walter E. Wines, Manager, ANPA Mechanical Dept., 370 Lexington Ave., New York 17, N. Y.

Great Lakes Newspaper Mechanical Conference— Pantlind Hotel, Grand Rapids, Mich., Jan. 18, 19 and 20. President Deo A. Padgett, Composing Room Supt., Cleveland *Plain Dealer;* Secretary Al. P. Oberg, Composing Room Supt., Flint (Mich.) *Journal.*

Illinois Newspaper Mechanical Conference—President, Alex Messengale, Peoria Newspapers, Inc., Peoria, Ill.; Secretary, Howard Colton, *Daily Pantagraph,* Bloomington, Ill.

International Association of Printing House Craftsmen — Secretary, Pearl E. Oldt, 702 Griswold St., S. E., Grand Rapids 2, Mich.

International Trade Composition Association — Frank M. Sherman, Executive-Secretary, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conference—Russell-Lamson Hotel, Waterloo, Ia., May 15, 16 and 17, 1948. President, Ed. C. Funk, composing room foreman, Waterloo, (Ia.) *Daily Courier;* Secretary-Treasurer, Paul Kamler, mechanical supt., Clinton (Ia.) *Herald.*

Lithographers National Association—W. Floyd Maxwell, Executive Director, 420 Lexington Ave., New York 17, N. Y.

Missouri Newspaper Mechanical Conference — Hotel Bothwell, Sedalia, Mo., Nov. 8 and 9. President Beryl A. Troutman, *Courier-Post,* Hannibal, Mo., Secretary-Treasurer O. K. Hammitt, *Monitor-Index,* Moberly, Mo.

National Association of Photo Lithographers — Netherland-Plaza Hotel, Cincinnati, Ohio, Sept. 15, 16, 17, 18, 1948. Walter Soderstrom, Executive Secretary, 1776 Broadway, New York 19, N. Y.

National Graphic Arts Education Association — Byron G. Culver, president; Fred J. Hartman, educational director, 719 Fifteenth St., N. W., Washington 5, D. C.

National Printing Equipment Association, Inc. — James E. Bennet, Secretary, 140 Nassau St., New York 7, N. Y.

New England Mechanical Conference—Hotel Statler, Boston, Mass., Nov. 8 and 9, 1947. President, Wm. F. Madden, Composing Room Supt., Worcester, (Mass.) *Telegram-Gazette.* Walter C. Crighton, Secretary-Treasurer, New London (Conn.) *Day.*

New Jersey Press Association Mechanical Conference—1948 Conference tentatively to be held in Atlantic City, N. J., in June. Hotel and date to be announced later. President Neal E. Dyer, Mechanical Supt., Camden (N.J.) *Courier-Post.*

Northwest Mechanical Conference — Hotel St. Paul, St. Paul, Minn., Feb. 14, 15, 16, 1948. President Charles N. Bertram, Pressroom Supt., St. Paul (Minn.) *Dispatch and Pioneer Press.* Vernon Eck, Secretary, 3725 48th Ave. S., Minneapolis 6, Minn.

Pacific Newspaper Mechanical Conference — Fairmont Hotel, San Francisco, May 1, 2 and 3, 1948. President J. W. Fitzsimmons, San Francisco (Calif.) *Call-Bulletin;* Secretary for the North, Edw. N. Conley, color press foreman, San Francisco *Chronicle;* Secretary for the South, Fred J. Moyer, Los Angeles, *Daily News.*

PNPA Mechanical Conference — Benjamin Franklin Hotel, Philadelphia, Pa., April 9 and 10. William N. Hardy, Manager, PNPA, 209-213 Telegraph Bldg., Harrisburg, Penna.

Printing Industry of America — James R. Brackett, General Manager, 719 Fifteenth St., N. W., Washington, D. C.

SNPA (Eastern Div.) Mechanical Conference — Walter C. Johnson, Manager SNPA, P. O. Box 1569, Chattanooga 1, Tenn. Chairman Executive Committee, I. J. Gardner, jr., Composing Room Supt., Chattanooga (Tenn.) *Times.*

SNPA (Western Division) Mechanical Conference—Hotel Adolphus, Dallas, Tex., Feb. 16 and 17, 1948. Chairman, W. F. Thompson, Austin (Tex.) *American-Statesman.* Secretary, C. W. Tabb, 723 Texas Bank Bldg., Dallas, Tex.

Negative Color Film

A NEW negative color film, Kodak Ektacolor, was announced by the Eastman Kodak Co., at the annual convention of the Photographers' Association of America. This film simplifies the making of color prints and photomechanical reproductions by eliminating the need for masking and for separation negatives. It is intended primarily for professional use with artificial light and can be processed in the photographer's studio. It will be supplied in standard sheet film sizes for use in conventional cameras and is expected to be available in the early part of next year.

The advantage of the Ektacolor process, states Eastman, derives from the use of colored couplers. These couplers provide automatic color correction as the film is developed, producing a negative image combined with positive color "masks." These give the film an over-all orange appearance after development.

Color correction is done by working from a positive transparency and making one or more low-density negative images as "masks," these are bound in register to the transparency. With Ektacolor, masking is not necessary.

Another saving in time is accomplished by the elimination of separation negatives. Working from the Ektacolor negative with color filters positive printing matrices may be on Kodak Pan Matrix Film. In addition black and white proofs may be made directly from Ektacolor negative on special paper.

Heads Goss Duplex Division

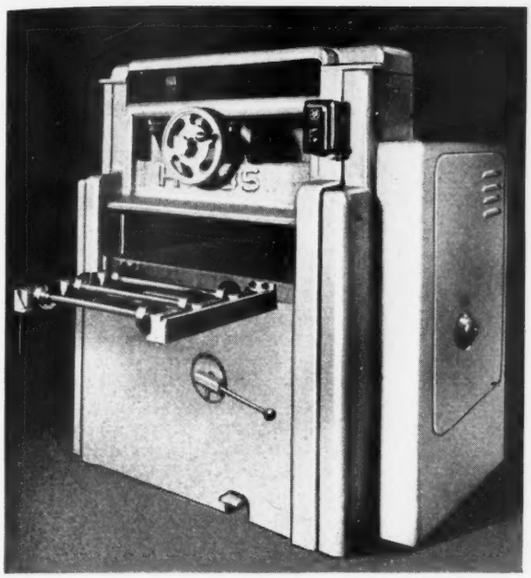
Lloyd B. Langs, for 25 years treasurer and a director of The Duplex Printing Press Co., has been appointed manager of the new Goss Duplex Division at Battle Creek, Mich., and has been made a vice president of The Goss Printing Press Co., Chicago, according to announcement by R. C. Corlett, Goss president.

Serving as assistant manager to Langs will be E. G. Morrison who has been transferred to Battle Creek from the Goss Chicago Office. Elmer Goebert will continue as works manager of the Duplex Division. A. J. Graf, formerly Duplex chief engineer, will be production consultant for all three Goss plants, including the Preston, England, plant of Goss Printing Press Co., Ltd.

Production at the Battle Creek plant will be devoted to the manufacture of tubular type and flat-bed newspaper presses and stereotyping equipment. Duplex models will continue to carry the "Duplex" and "Unitubular" trade marks but will have Goss name plates.

The Duplex Printing Press Co., which sold only certain assets to Goss, has moved into temporary offices and will go into voluntary liquidation, according to Arthur P. Stone, vice president and secretary. He explained it will require at least a year to dispose of real estate and other assets not purchased by Goss. Mr. Langs will continue as treasurer until liquidation is completed.

EQUIPMENT & SUPPLIES



View of Hobbs Tri-Power Cutting Press showing controls and roller cradle.

Tri-Power Cutting Press

THE Hobbs Tri-Power Cutting Press has been announced by W. H. Ware, president of Hobbs Mfg. Co. The press is used in the rubber, envelope, textile, printing, seal and label fields.

Power is transmitted to the head from a 2 h.p. motor by a 24 in., 470 lb. flywheel, revolving at approximately 600 r.p.m. Head bearings are 13 in. long and 4 in. wide. Four of these on each end make a total of 418 sq. in. of bearing surface. A cast iron cap across top of press locks head in place.

A clutch and brake allows several different types of operation from jogging to continuous run or single stroke. The head may be jogged to any desired position or stopped at any point in the stroke. Brake is V-belt type and clutch is multiple disk dry plate design mounted in the hub of flywheel.

In front of press is a roller cradle with rollers. This cradle is said to relieve the operator of the physical work required in pulling out and pushing in the board.

Electric control switch on right leg of machine, an operation selector lever on right hand side, a foot pedal at lower right hand corner, and head adjusting sheel in front of operator. Adjusting wheel has locking device. Mechanism is enclosed within metal walls.

Press is available in two sizes: 24 in. by 38 in. and 24 in. by 44 in. In envelope cutting maximum die size is 75 lineal inches. Press will handle up to 500 sheets depending upon the paper. It is rated as an 8 T. cutting press. An illustrated folder has been prepared in which is contained a detailed description of the operation and construction of the press. Copies of the folder may be secured upon request to *Printing Equipment Engineer.*

Plastic Binder Screws

LOOSELEAF-BINDER screws injection molded of Tenite plastic can be produced in large quantities soon, without machining operations. Caps and posts are molded at the same time in the same multiple-cavity molds. Threads in cap and post are produced in the mold. Since Tenite can be molded to close tolerances, states the sponsor, perfect fit of these parts is assured.

Tenite is tough material which it is claimed, withstands wear and hard use. It has a naturally lustrous, chip-proof surface, and can be made in any color. These posts are supplied in black, clear and gray Tenite. Sizes made are $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$ and $\frac{7}{8}$ in. lengths in $\frac{7}{32}$ in. diam. screws; and $\frac{3}{4}$, 1, $1\frac{1}{2}$, 2 and $2\frac{1}{2}$ in. lengths in $\frac{5}{16}$ in. diam. screws. Binding screws are manufactured by Injection Molding Co. for distribution by Gane Bros. & Lane. The plastic is cellulose acetate butyrate Tenite made by Tennessee Eastman Corp. Further information may be secured upon writing to *Printing Equipment Engineer.*

Tenite binder screws are made in various colors and sizes.

Miehle 29 Instruction Book

AN INSTRUCTION manual, just off the press, gives details covering the operation, adjustments and maintenance of the new Miehle 29 Letterpress. The 58-page, $8\frac{1}{2}$ in. by 11 in. book is illustrated with photographic views of sections of the press, all keyed to the text. This is the first book in a series of technical manuals now in preparation for the complete line of Miehle Presses.

The book opens with a general overall description of the press. It goes into the important features of lubrication and care of the press; then takes up the necessary adjustments and the operation of each of the separate mechanisms with which the pressman must be familiar. In a special 4-page section at the back are 15 illustrations presenting a graphic description of the procedure for putting a job on the 29 Letterpress efficiently.

Suggestions for maintenance of the press to assure long life and uninterrupted service are also given. A classified index facilitates finding the necessary instructions pertaining to any section of the press.

Copies of the instruction manual are being sent to all present Miehle 29 owners; and are included as part of the equipment of every new Miehle 29 delivered.

Drum Pump

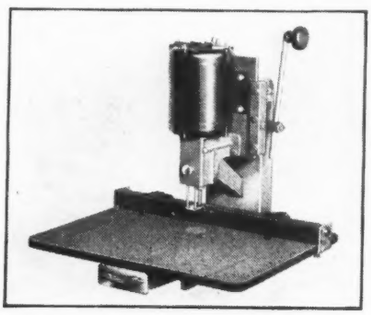
A DIAPHRAGM principle is utilized by the General Scientific Equipment Co. in a new hand pump. The pump is used to remove liquids such as alcohol, kerosene, gasoline, oil, paint thinners, water and sprays from drums and barrels of 15 to 60 gal. capacity.

It is claimed the device will pump 15 gal. of light oil per min. and requires no priming. Pump screws directly into

drum and no separate bung bushings are required for 1½ or 2 in. drum openings, manufacturer states. The handle allows liquid to drain into drum and an automatic seal prevents evaporation. Further information may be secured upon writing to *Printing Equipment Engineer*.

Improved Paper Driller

PIONEER - TOLEDO CORP. announced it is back in production on its Model B Paper Driller. According to F. S. Young, president, the basic

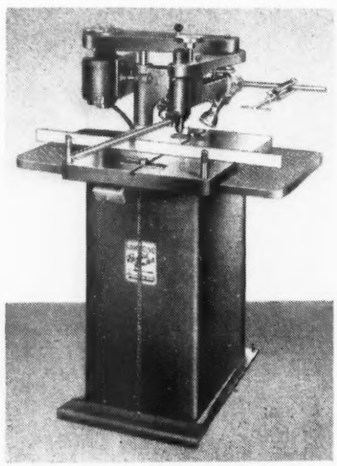


features of the former model have been retained with improvements in design and construction. Motor equipment has been increased to ⅓ h.p. Solid cherry table is 24 in. by 18 in. Equipped with dual gauges, one right and one on left; gauge stops for 6 hole work. Hollow drills have 1¾ in. capacity in sizes from ⅛ to ½ in. as well as in metric sizes.

New Radial Router

A NEW model R-4 radial router has been announced by Hammond Machinery Builders, Inc. This model replaces the previous R-3 model and is designed for smaller daily and weekly plants.

A belted drive and ball bearing spindle has been adopted, to allow the use of a



constant speed regular type motor. The ball bearing spindle runs at a constant speed of 12,000 r.p.m.

The routing depth for either type-high or shell plates is obtained with the handwheel at the top when idle or running. The spindle can be locked by the knob at the left of the spindle. The pulleys and other operating parts are dynamically balanced.

The radial arms, made of aluminum, are supported from and pivot on a ball and needle bearing post at the rear. The excess weight of the front arm and spindle is transferred to the back arm and post by a spring and lever bridge. The arms are operated with a front and a rear handle. The foot treadle raises the wood cross rail which raises the front radial arm for skipping from one routing area to another. The treadle extends across the full front of the base. A tool tray is mounted above the rear radial arm on the belt guard.

The work is illuminated with two lights and is held with clamps. These clamps slide in the table slot. A plate can be placed in any position on the table. The front clamp is locked in the slot by a turn of the lever and acts as a plate stop. The rear clamp, locked in the same manner, has an eccentric in combination with the lock which provides locking of the clamp and plate simultaneously. Holes in the bottom of the slot provide chip removal. Grilled shelves either side of table provide work rests. Further information may be secured upon request to *Printing Equipment Engineer*.

Installs G-E Electronic Press Drive

AN ELECTRONIC press drive system, supplied by the General Electric Co., will be installed by the Buffalo (N.Y.) *Courier-Express* as part of its plant expansion program.

The drive will be applied to new Scott Newspaper presses consisting of 12 black and white units, three folders and six color attachments.

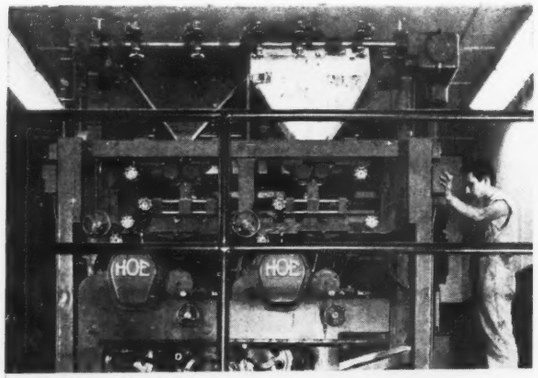
Special drive foundations will not be needed. D-c motors for the drive, which is powered and controlled through ignitron tubes that convert a-c to d-c, will be press-mounted and a special balcony to house the control equipment will be constructed over the pressroom.

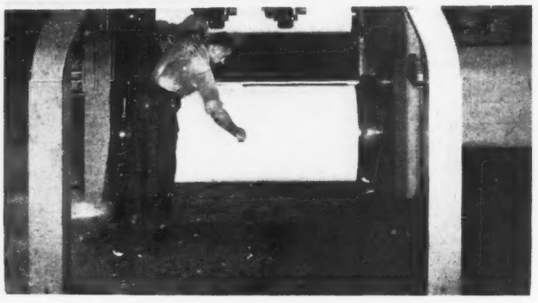
Three other newspapers previously have adopted the G-E electronic drive. These are the Philadelphia *Inquirer*, the Dallas (Tex.) *Morning News* and the Denver (Colo.) *Post*.

Static Eliminator Bulletin

A 4-PAGE bulletin in two colors has been issued by the U. S. Radium Corp. on the Ionotron static electricity eliminator as applied to printing presses. In the bulletin are shown detailed design specifications, installation data and performance reports.

The Ionotron static eliminator consists of a thin strip of metal foil, usually platinum or gold, which has had a source of alpha radiation evenly distributed through it. This foil is welded to a heavier metal backing, and the assembly is mounted in a housing which serves both as a support and as a shield. Copies of the bulletin may be secured upon request to *Printing Equipment Engineer*.





A MODIFIED newspaper pressroom has recently been constructed in New York plant of R. Hoe & Co., Inc. In this specially constructed room adjoining the executive office, a Hoe color-convertible newspaper printing unit and a double newspaper folder are installed on a substructure. The paper is fed from underneath. The equipment is used for demonstration runs as well as for research work by company engineers.

The illustration shows the printed paper webs entering the folder where they are folded, cut off and delivered as finished newspapers. At the lower level or reel room floor may be seen the 3-arm reel, running belt tension and web splicing mechanism which splices a fresh roll of newsprint to the expiring stump and severs the latter web in one operation without slowing down the press. The operator in the reel room is preparing a fresh roll for splicing while the expiring or running roll is showing just below the steel girder.

Type Face Additions

INTERTYPE Corporation has announced several additions to the Futura family: 18 and 24 pt. Futura Bold Condensed with Medium Condensed No. 2, 30 pt. Futura Medium Condensed and 30 pt. Futura Bold Condensed. These new faces are shown below:

ABCDEFG abcdefghijkl 123
ABCDEFG abcdefghijkl 123
18 Pt. Futura Bold Cond. with Medium Cond. No. 2

ABCD abcdefghijkl 123
ABCD abcdefghijkl 123
24 Pt. Futura Bold Cond. with Medium Cond. No. 2

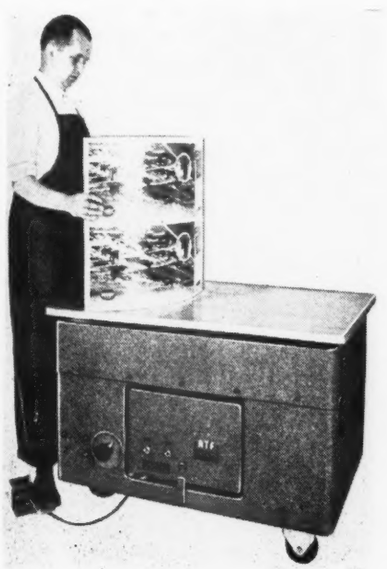
ABC abcdefg 123
30 Pt. Futura Bold Condensed

ABCD abcdefg 123
30 Pt. Futura Medium Condensed

Ten Models of Paper Joggers

PAPER joggers in 10 models have been announced by American Type Founders. They are built of metal except for hardwood decks. The mechanism is enclosed. All have panel mounted controls. All are power-driven.

There are three types of joggers in the line: Five single action models, ranging in size from 14 in. by 20 in. to 28 in. by 40 in. The largest size is a floor model with foot control. The operator holds the sheets on edge and the action of the deck jogs them into alignment.

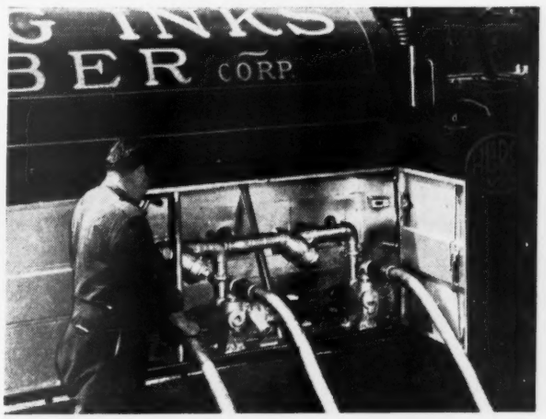


Pictured here is the VAC-28 floor unit paper jogger of ATF.

Three double action models, in sizes from 14 in. by 20 in. to 26½ in. by 31 in., vibrating deck set at an angle so sheets are jogged into alignment vertically and against the end board at the same time.

The other two models have a tilting deck in which the deck is tilted with two side boards against which sheets vibrate. There are two sizes, 14 in. by 20 in. and 27¼ in. by 39¼ in. This type is for jogging sets of sheets, such as multiple forms with carbon interleaving. It can be placed so sheets fall into the deck from delivery of press or other production units.

All models handle every weight of stock from onionskin to heavy board. Further information may be secured upon writing to *Printing Equipment Engineer*.



This 2000 gal. tank truck is being used by J. M. Huber Corp., for shipping and delivering multi-color printing inks. Separate tanks permit delivery of red, yellow and blue ink in one trip.

Ships Colored Inks by Tank Truck

SHIPMENTS of multi-color printing inks via tank truck are now being made by the J. M. Huber Corp. Normally delivered in 55-gal. drums, a shipment of colored inks was recently made from the Huber plant in Brooklyn to the Western Printing and Lithographing Corp., Poughkeepsie, N. Y., in a specially designed 2000-gal. tank truck equipped with three bulkheaded, leakproof tanks. A total of 675 gal. of red ink, 825 gal. of yellow ink and 500 gal. of blue ink can be delivered in one operation.

The fittings of the tank truck are not interchangeable. This prevents mixing of ink on delivery or on loading. The ink compartments on the truck are individually heated with fin tube heat exchangers which are connected to a steam line at point of delivery and are so constructed that the ink is brought up to the proper temperature prior to delivery in cold weather.

The tank truck is equipped with rotary gear pumps driven from a power take-off connected to the truck engines. The pumps are reversible so that they can be used for both loading and unloading. Pump drives are by silent chain.

Western Printing and Lithographing Corp. in Poughkeepsie has made a special tank installation in a storage room adjacent to its press room. The installation consists of four tanks suspended from the ceiling, one for red, one for blue and one for yellow ink. The fourth tank is for black ink, deliveries to which are normally made by tank truck. All tanks are equipped with circulating type rotary gear pumps with take-offs for each color to the presses. Pump capacities of 40-gal. per min. are maintained at minimum pump speeds.

A similar installation is nearing completion at the Holyoke Magazine Press, Holyoke, Mass.

Zinc Dust Booklet

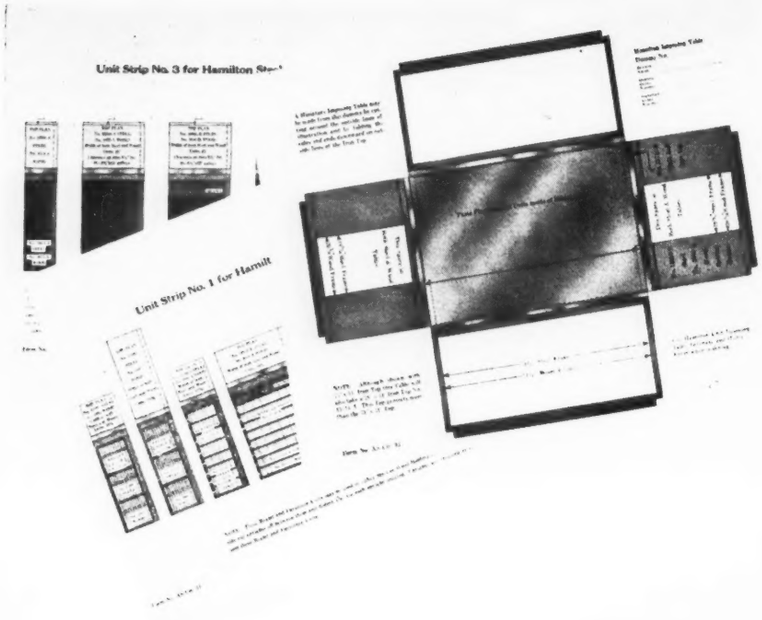
DID you know that zinc dust has such widely varied applications as in the manufacture of brake linings and the sulpha drugs? This is just one of the notes contained in a pamphlet on *Zinc Dust*, its characteristics and uses, recently issued by Federated Metals Div., American Smelting and Refining Co. Of interest to the food processing, paper manufacturing, paint, rubber processing and other industries, this booklet is one of a series Federated issues periodically on non-ferrous metals and its products Copies of the booklet, and of earlier booklets on lead products, bearing metals, aluminum alloys and other non-ferrous metals may be secured by writing *Printing Equipment Engineer*.

Copyfitter Folder

THE Taylor Publishing Co. has prepared a 4-page illustrated folder. 6¾ in. by 8½ in., in which is described the Lawrence Copyfitter Slide Rule. By setting the number of characters in the copy with the characters per running pica, the number of lines the copy will run is determined by reading the opposite figure on the slide rule. Copy of the folder will be sent upon request to *Printing Equipment Engineer*.

Humidity Bulletin

AN 8-PAGE booklet, in two colors has been published by Surface Combustion Corp. The booklet is entitled *Control Humidity If You Want to Get The Most from Comfort Air Conditioning*. The principles of the Kathabar system of air conditioning with humidity control are discussed in this booklet. Copies of it will be mailed upon request to *Printing Equipment Engineer*.



Hamilton Mfg. Co.'s new illustrated Imposing Table Catalog contains full information and specifications about the company's line of Imposing Tables. To aid executives who feel that the standard line illustrated and described in the catalog does not fill the peculiar requirements of their plants, Hamilton provides an Imposing Table Design Kit. By means of the kit, the executive can cut out unit templates, and paste them in position on miniature reproductions of the imposing tables. In this way, the executive can get a visual idea to scale of exactly what he wants.

Hamilton Imposing Table Catalog and Design Kit

HAMILTON Mfg. Co. has issued a new illustrated catalog, consisting of 24 pages, size 8½ in. by 11 in. The title of the catalog is *Hamilton Imposing Tables and Miscellaneous Equipment for Commercial Printing Plants.* The various sizes and types of imposing tables are described together with illustrations.

One of the features of the book is on page 2 under the title *How to Estimate Your Own Imposing Surface Requirements.* Another feature of the new catalog is that entitled *Designing Your Own Hamilton Imposing Table.* This section should appeal to many printing plant executives who have requirements for this type of equipment peculiar to their particular plants. If none of the typical designs of Tables shown in the catalog fill the executive's requirements, he may design his own table to fill the needs of his plant. This is done by selecting the imposing surface from a list presented in the catalog. The next step is to select the holding frame to support the selected imposing surface. The third step is to make selection of reglet and furniture units, galley racks, drawer units, letterboard units, chase racks and bin units. For this purpose, Hamilton will send accurately scaled miniature halftone and line illustrations (scaled templates) of the various holding frames and storage units. These are contained in what is called *Imposing Table Design Kit.* Certain sheets contain blank halftone illustrations of the table in five dimensions. Other sheets contain the scaled miniature illustrations of units to be fitted into the various sides of the table layouts. By cutting these out and pasting them together, one can see how a new imposing table, with units of the executive's choice, will be assembled and how it will look on the floor of the composing room. Or, states Hamilton, if the executive will tell the size of imposing surface needed and indicate the types of storage or other units preferred, the cutting and pasting will be done for the executive.

Other products described and illustrated are cut-storage cabinets, letterboard cabinets, galley cabinets and galleys, chase racks and transfer trucks, strip-material cabinets, waste metal trucks, ink and roller cabinets, bindery and cutter tables, machinists' work benches, mold and matrix cabinets, proofreaders' desk and newspaper equipment.

A copy of the catalog No. 24 can be secured by addressing your request to *Printing Equipment Engineer.*

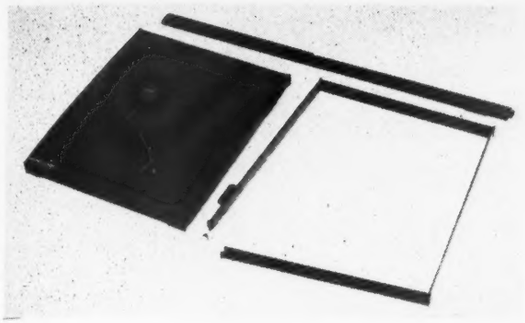
Southworth's new electrically operated skid lift shown here is designed as a companion unit for cutters to eliminate heavy lifting of stock. An electric eye is used to keep the top of the lift level with the cutter table. Melville C. Cole, president of Southworth Machine Co., is pointing out the operating features to David W. Schulkind, president of E. P. Lawson Co.

Bulletin Issued

A 4-PAGE bulletin (No. 611C) in which is described an alternating current motor having adjustable speed is now available from the Louis Allis Co. The Adjusto-Spede is described in the folder as a device for transmitting controllable torque through the use of electro-magnetic forces in which there is no mechanical contact between driving and driven members. It is suited for driving such equipment as printing presses, paper and sheet metal slitters, conveyors and other variable speed machines. It operates from a 2 or 3 ph., a. c. supply. Copies of bulletin No. 611C may be secured upon request to *Printing Equipment Engineer.*

Lift Truck Guide

A LIFT truck guide has been published by the Towmotor Corp. to assist in the selection of a lift truck or accessory. The guide is pocket size and consists of 28 pages with illustrations. Copies may be obtained upon request to *Printing Equipment Engineer.*



View of Efficient Equipment Co.'s Type Page Frame. At lower left is type page locked in frame; at lower right is type frame with separable corner open; at top frame is shown in folded form for storage.

Type Page Frame

THE Efficient Equipment Co. announces a type frame that eliminates string in the tying-up of made-up pages of type. The frame is specifically intended for plants handling quantities of standard size pages. No adjustments are necessary when using the frames since they are made to the exact dimensions of the user's type pages.

Essentially, the frames consist of four rigid sides connected by hinges. One of the corners is joined by a separable hinge. On the opposite side two spring take-ups are incorporated insuring tight type pages and alignment. When not in use the frames can be folded to occupy a minimum of space for storage.

Advantages claimed for the frame by its users as well as the manufacturers are: pages tied up in one-eighth the time required with string; better proofs; safer and faster handling of type pages; corrections made in seconds; reduced lock-up time; and an overall saving of more than 6 min. per page.

To Build Upham Attachment

ARRANGEMENTS have been completed whereby the Western Printing Machinery Co., Chicago, will manufacture the Upham color printing attachment for Miehle letterpresses. The firm will also supply present users of the attachment with repair parts. Announcement of the negotiations with Miehle Printing Press & Mfg. Co. was made recently by H. Sathen, president of Western Printing Machinery Co.

Champlain to Manufacture English Gravure Presses

RIGHTS to the American manufacture of a line of sheet-fed gravure presses has been obtained from Linotype and Machinery Ltd., of London by the Champlain Co., Inc., Bloomfield, N. J.

Features incorporated in these presses which are claimed to simplify and speed quality work are: thin copper plates from which the printing is done which may be easily attached and removed; register gears are of a special type and drop fingers are fitting to obtain exact register: the plate cylinder can be moved independently of impression cylinder, both are of the same size, an automatic trip throws them out of contact; sheets are delivered printed side up; nothing comes into contact with the printed surface before delivery; doctor blade can be adjusted for leveling and angle.

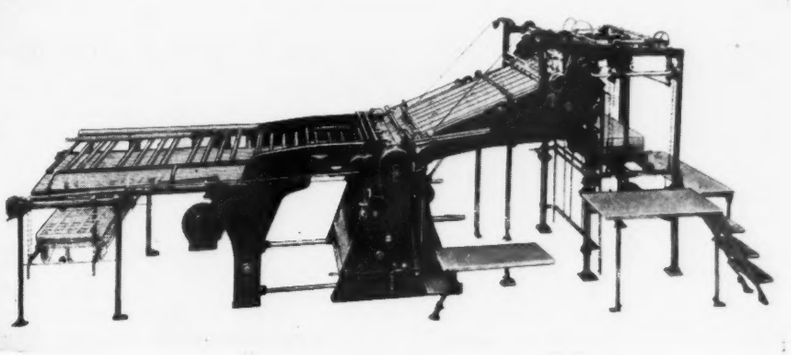
These presses will be available in three sizes: No. 4 handles sheets 26 in. by 40 in.; No. 5, 22 in. by 30 in.; and No. 17, 11¾ in. by 19 in. These presses may be driven horizontally or vertically. The two larger size presses may be secured with an automatic stream feeder.

The No. 4 press will be ready for delivery in this country within 12 months. Production on other sizes will be announced later.

ATF Chief 22 Offset Press

AMERICAN Type Founders has announced that deliveries are now being made on an improved model ATF Chief 22 offset press. The sheet size of the press is 17½ in. by 22 in. The smallest sheet that can be printed is 8 in. by 10 in. Speed range is from 3000 to 5000 i.p.h.

Some improvements made in the press are Bijur automatic lubricating system, universal joint type coupler on the ink fountain hand crank shaft, steel speed wheel rollers and larger cast guard for the ink motion gear train. Floor space required is 51 in. by 76 in. Lightest stock that can be printed is onionskin; heaviest stock, 0.024 (6 ply). Net weight is 3200 lbs. Further information may be secured upon request to *Printing Equipment Engineer*.



Shown is the English designed gravure press to be manufactured by the Champlain Co., Inc.

Develops New Stringing Equipment

FRANK GRAEBER, general manager in charge of production, of the Graeber Stringing and Wiring Machine Co., has completed the development of a new type of stringing machine for use in calendar manufacturing.

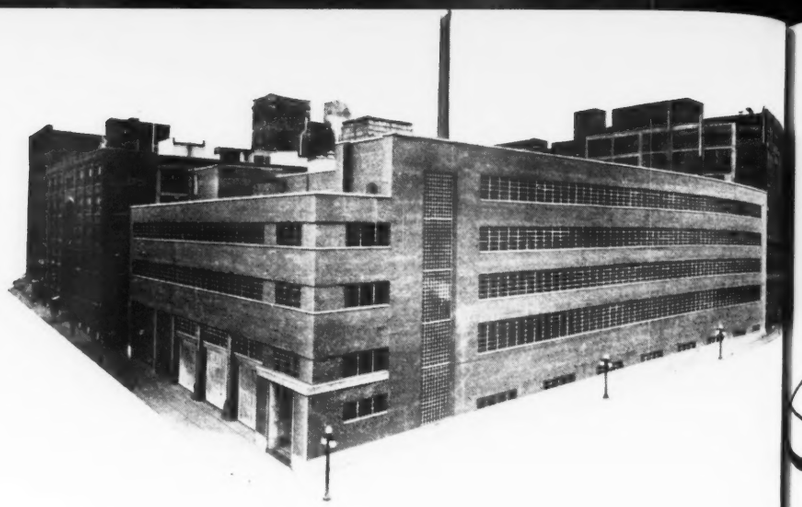
Frank Graeber, designer of stringing machine for use in calendar manufacturing.

Mr. Graeber has been in the business of manufacturing stringing equipment since 1905. In 1944 he formed a company which became a division of the New Era Mfg. Co. In the past three years, Mr. Graeber has modernized and improved the company's stringing equipment, which is manufactured under his personal supervision.

Materials Handling Book

THE coordination of all steps in materials handling is described in a book entitled *Turner System of Materials Handling*. The book contains suggestions for the efficient use of floor space with illustrations showing scientifically engineered handling methods. Other subjects covered are the concentration of materials within easy reach of operators, vertical and horizontal expansion, practical stacking and storing, the elimination of waste motion in handling, and the use of movable transports, bin sections, die and shelf racks, pallets, shop boxes, trays, etc. The systematic movement of products or parts through the plant and a series of interlocking units are explained in other sections of the book.

Specially designed units for efficient operation of the system are illustrated. A copy of the book will be sent upon request to *Printing Equipment Engineer*.



This $2,500,000 modernistic addition to the Crowell-Collier Publishing Company's plant in Springfield, O. was opened formally during the firm's 70th anniversary celebration recently. New high-speed color gravure presses, each capable of printing 720,000 magazine pages an hour, and other up-to-date equipment increases the production potential of Crowell-Collier which already turns out more than a million copies of *Collier's*, *The American Magazine*, and *Woman's Home Companion* every working day.

70th Anniversary *of founding*

marked by plant expansion of Crowell-Collier Publishing Co. in Springfield — Modern equipment provides means for producing magazines in excess of a million per day

THE Crowell-Collier Publishing Co. celebrated its 70th anniversary the week of Sept. 15 to 20 with an open house at its Springfield, O., plant where a new $2,500,000 addition embodying the latest in magazine printing facilities was opened formally.

This new addition increases the plant's floor space to 917,000 sq. ft.—an entire city block—and gives the publishers of *Collier's Weekly*, *The American Magazine*, and the *Woman's Home Companion* one of the world's foremost publishing plants. Modern and improved methods of printing, binding and distributing are incorporated in newly installed machinery to increase the production potential of Crowell-Collier which heretofore has been turning out magazines at the rate of more than a million every working day.

Board Chairman Thomas H. Beck and Peter J. Dennerlein, Vice President and head of the Springfield plant, inaugurated the week-long anniversary ceremonies by dedicating a flag-pole in front of the main entrance in memory of company employes killed in the recent war. Immediately thereafter residents of Springfield and neighboring communities, as well as visitors from such far-distant countries as Australia and India, were taken through the plant on tours at the rate of more than 3000 a day.

The streamlined addition is of modern brick and steel design in which generous use is made of glass, glass brick, and fluorescent lighting. It consists of a basement and three floors, the top floor being as high as two normal floors to provide space for eight new high-speed color gravure presses.

Each of these new presses, which are capable of printing in four colors on one side of a page and three on the other during the same process, has a production capacity of 720,000 pages of *Collier's* magazine an hour. The paper consumption of this pressroom alone—not considering other Crowell-Collier pressrooms—when operating at full capacity will be around 150 rolls of about a ton each every 24 hours.

The new building is so laid out that as pages come off these new presses they are stacked and then lowered on automatic elevators to the second floor bindery. This area is air-conditioned to reduce two factors which heretofore have led to wastage—static on paper stock in winter and excess humidity in summer.

Once bound, the magazines are conveyed to trimmers and then on a continuous belt direct to wrapping tables and addressing machines. From there, bundles and mailbags are delivered by chutes to the first floor, directly into trucks and freight cars which by means of roadways and sidings now can be brought right into the plant.

Facilities for unloading paper from freight cars also are available. Strategically located circular turntables make it easier to get the huge rolls into elevators which lower them to the basement storage well.

The imposing structure in which Crowell - Collier publishes magazines with a combined circulation of nearly 10 million is a far cry from the one-room printing plant in a two-story farm implement factory in which the company's first magazine was published 70 years ago.

The publication—*Farm & Fireside*—was a modest farm journal and the brainchild of John S. Crowell who served as general manager. As partners in this semi-monthly farm magazine, he had P. P. Mast, a Springfield manufacturer of farm implements in whose building it was published, and the latter's nephew, Thomas J. Kirkpatrick, who served as editor.

In 1885 Mast, Crowell and Kirkpatrick launched another publication, what now is the *Woman's Home Companion*. By 1900 the circulations of both *Farm & Fireside* and the *Woman's Home Companion* were soaring. As Mast devoted more time to other enterprises Crowell assumed greater control over the publishing business and the firm's name was changed to The Crowell and Kirkpatrick Co.

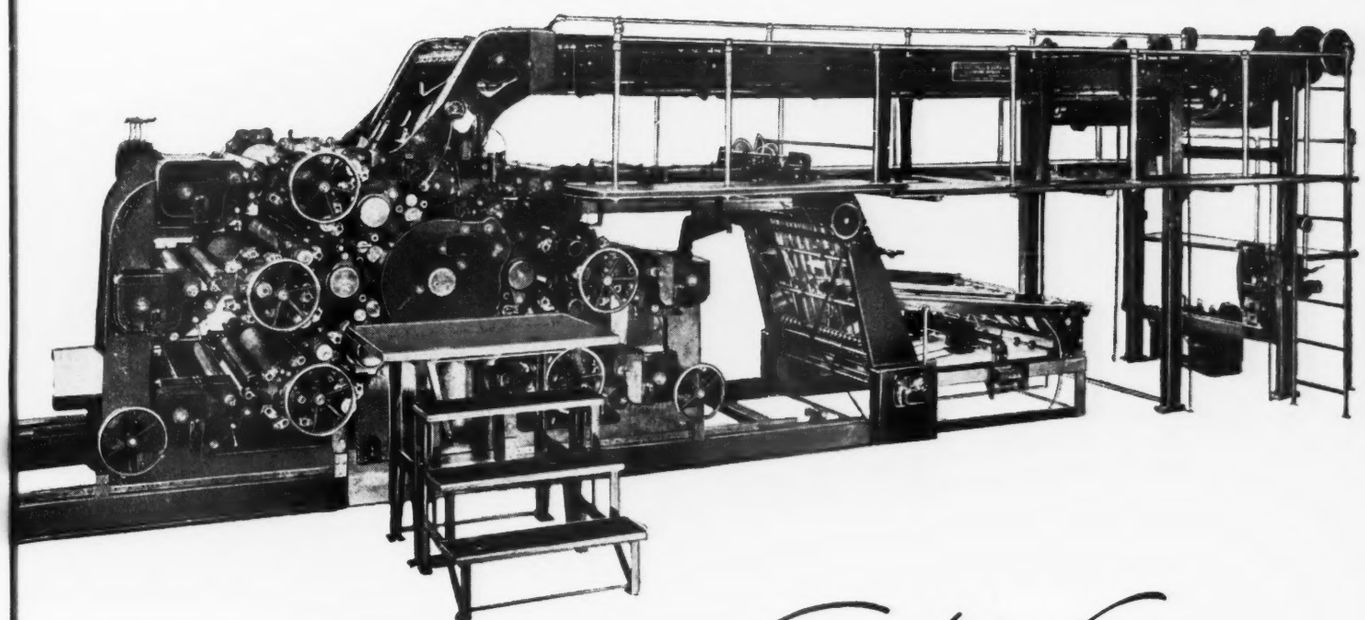
In 1902 the name was changed to The Crowell Publishing Co. and that was retained even after Crowell sold his interests in the firm to Joseph P. Knapp, one of America's outstanding lithographers, in 1906.

The company continued to expand under its new management and in 1911 acquired *The American Magazine*, a monthly of general circulation. In 1919 it expanded still further by purchasing *Collier's Weekly* and the Collier book business. In 1939 the name was changed officially to The Crowell-Collier Publishing Co.

Report for Factory Planning

A report, in which is discussed the importance of clean and safe surroundings for employees in contributing to the over-all efficiency of a plant, has been issued by the Policyholders Service Bureau, Metropolitan Life Insurance Co. Entitled *Factory Planning and Layout*, the report is written from an industrial relations rather than an engineer viewpoint. Copies are available to executives who request them on their business stationery from Policyholders Service Bureau, Metropolitan Life Insurance Co., 1 Madison Ave., New York 10, N. Y.

Five Color Printing



the '47 Way

Speed and Economy, combined with register will, more than ever before, be imperative requirements, in handling the volume which a recent printing survey promises for 1947.

This Cottrell Five-Color, sheet-fed rotary, built at our Claybourn Division, meets these requirements. It has a speed of up to 6000 sheets per hour—in five colors—with a maximum net production.

C. B. COTTRELL & SONS CO.
Westerly, Rhode Island

New York: 25 E. 26th St. • Chicago: Daily News Bldg., 400 W. Madison St. • Claybourn Division: 3713 N. Humboldt Ave., Milwaukee, Wis. • Smyth-Horne, Ltd., 13 Bedford Row, London W.C. 1, Eng.

Cottrell

ER 93 YEARS OF GROWING WITH THE PRINTING INDUSTRY

CARE and ADJUSTMENT

Linotype Single and Mixer Distribution Boxes

By WILLIAM J. BUTLER

II.

In setting the stroke of the matrix lift, the shelf or lifting shoulder must come slightly below the bottom of the matrix. The top limit of the stroke is very important also—the matrix must clear the top surfaces of the rails.

On the older machines where no provision has been made to adjust the lift to pick up one matrix only, it seems that the extension or lip above the lifting surface on the matrix lift is depended upon to prevent the lift extending under two matrices. However, the box will give less trouble if the shoulder extension is not depended upon, but the lower rails, bar point, font distinguisher block and matrix lift are kept in such shape as to prevent the matrix lift extending under more than one matrix.

If you wish to reduce the height the matrices are to be lifted above the distributor box rails you run the risk of the whole matrix lift, (including the extension) slipping under the matrix to be raised unless this has been prevented by having the lift, font block and lower rails in condition to prevent it.

Under certain conditions, thin matrices, when raised too high above the distributor box rails will twist, fall out or jam when the lift starts down and leaves them unsupported until they drop down and their upper lugs are supported by the upper rails.

If the matrices are lifted high enough to clear the rails by approx. 1/32 in., the rails will support them as the distributor screws take hold and start the matrices toward the distributor bar.

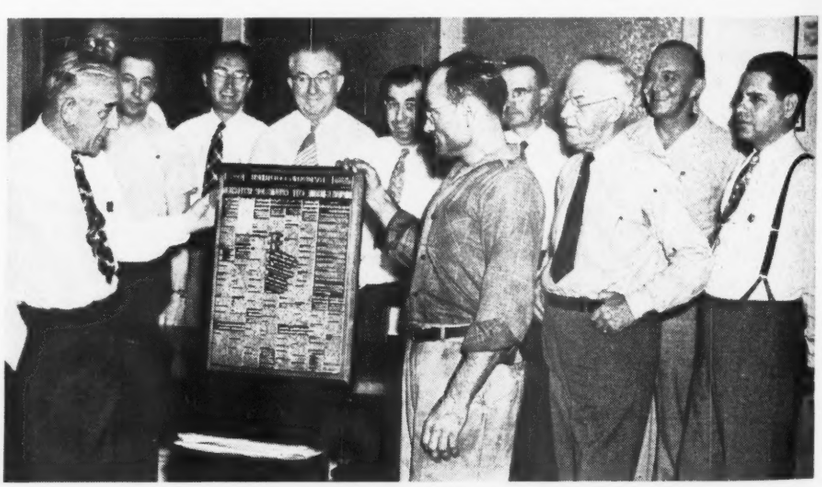
If the cam on the end of the back distributor screw was installed at the factory, its timing is no doubt correct. But if the original cam has been replaced, it can be checked for timing by raising a matrix—a thick one is more stable—by turning the distributor by hand. Just before the matrix clears the shoulders on the rails there should be 0.025 in. space between the upper lugs of the matrix and the right-hand edge of the thread or left-hand side of the groove of the upper distributor screws.

Box Rails

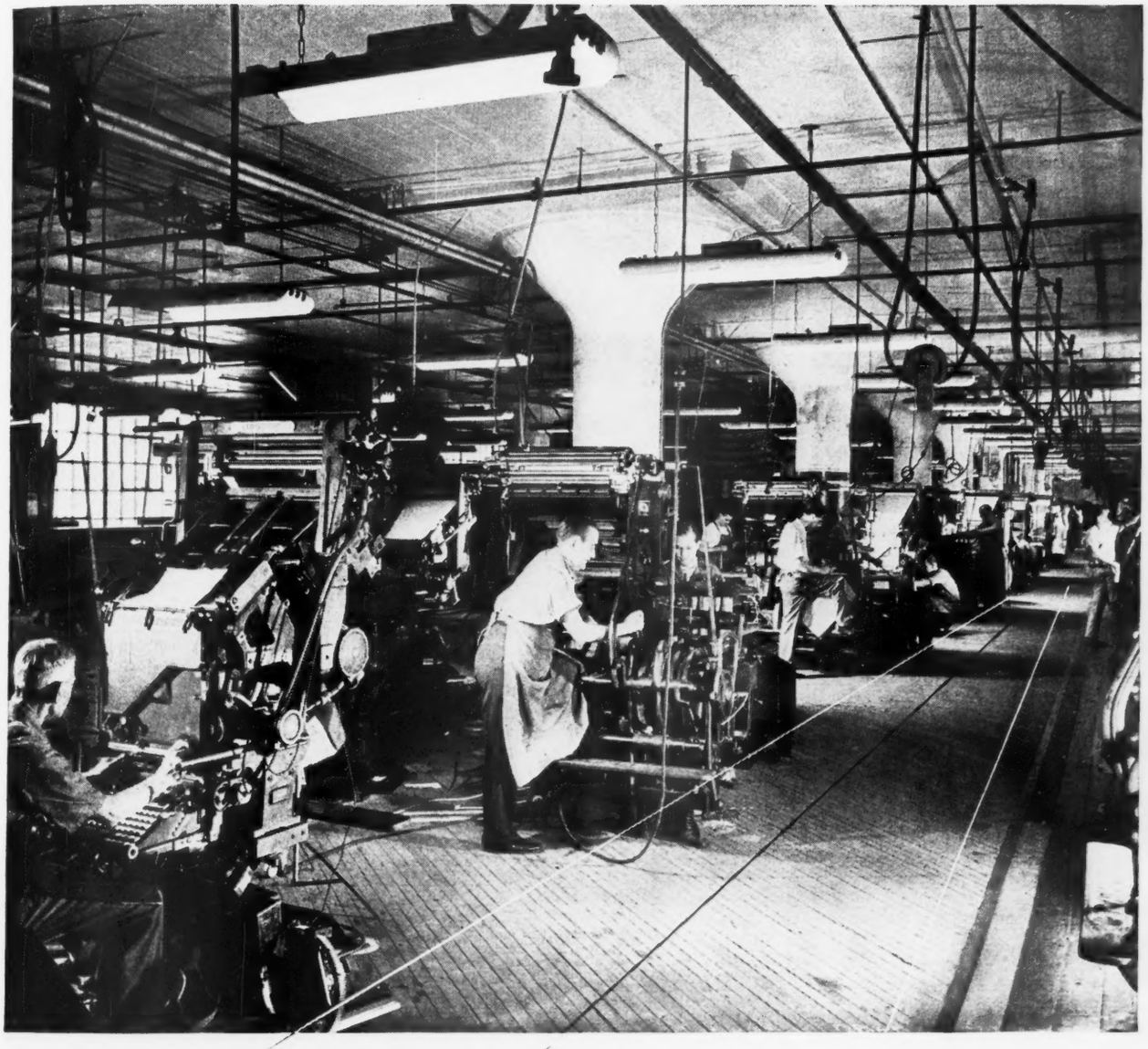
The box rails should be level with each other across the top and straight and parallel for their whole length, allowing just clearance for the matrices between them. Test the rails with a small try-square. When new rails are fitted, trouble is often experienced in getting the new rails to fit on the old dowel pins. Rather than force the rails onto the pins, which might distort the rails or the side plates or both, use a 4-0 taper pin reamer in a tap wrench. Start the reamer in that side of the rail which the dowel pin will enter, and clear just enough so the rail will slip on the pin with light finger pressure. Tapping the rails on their edge lightly will correct any slight misalignment across the top.

The flat spring riveted into recess in the front upper rail which holds the matrix about to be lifted when the distributor shifter is withdrawn, is often neglected. The unriveted end should extend out past the face of the rail far enough to hold a matrix in position with its lugs against the stops on the four rails while it is lifted even though the distributor shifter has been withdrawn. When replacing the flat spring, test it to see that the working end springs out of its slot after being depressed fully. It may bind on one side and remain in its slot. A small screwdriver can be used to force it gently in line with its slot so it will be free on both edges. (The spring is brittle and breaks easily when prying with a screwdriver.) So do not try bending it unless you have a new one at hand.

When new rails are installed they must be checked for their relation to the distributor box bar point, the matrix lift and alignment with the distributor bar itself. Run a pi matrix from the rails onto the distributor bar by turning the distributor screws slowly by hand and watch the matrix pass from the box rails to the



Harold A. Stretch, new publisher of the Camden (N.J.) *Courier Post* was presented with a plaque of the first stereotype mat cast on May 14, 1947, the date the newspaper resumed publication after a three and one-half month suspension. The mat was cast, electro-plated, bronze treated, silver sprayed, buffed, shellacked and mounted on solid oak in full size. Those witnessing Mr. Stretch receive the plaque from Nicholas Martarella, stereotype foreman, right, are: Lowell Goodwin, composing room foreman; Lawrence A. Terry, building superintendent; James T. Scott, business manager; Frank H. Ryan, editor; William P. Greenus, detail manager; Frank J. Kinsella, advertising director; Walter Tushingham, general manager; Henry Danielson, pressroom foreman; and Neal E. Dyer, mechanical superintendent.



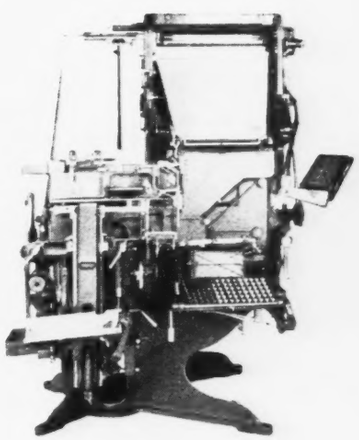
Homestretch for Thoroughbreds

NO LONGSHOTS on this assembly line. Every Linotype that leaves the factory is a favorite, earmarked to win laurels in a fast-moving composing room.

Before the final okay that says, "ready for crating," exhaustive tests are run to make sure that your Linotype is just as good as its name . . . tests with metal in the pot and matrices in the magazines. It means that your long-awaited Linotype runs a trial, if you please, and that a brilliant performance on the job is assured.

Printers know the Linotype by its dependability and capacity for turning out profitable work. Over sixty years in the perfecting, Linotype is today the most used composing machine in the world, a thoroughbred every inch of the way.

MERGENTHALER LINOTYPE COMPANY
29 Ryerson Street, Brooklyn 5, New York



TRADE LINOTYPE MARK

Linotype Caledonia and Caledonia Bold

bar. Then turn the screws backward until the matrix either enters between or strikes the rails, when the rail alignment can be checked.

Box Bar Point

The distributor box bar point should be flush with and in line with the bottom of the distributor box bar and just long enough when the bar is in place to pass a thin space 0.028 in. thick with a few thousandths clearance. It is bad practice to try to pien a worn bar point to increase its length except as an emergency measure. (Mostly, these points are hardened and will break if tapped with a hammer. If the point must be pienied, draw the temper. After piening, harden it again by heating to cherry red color and plunge into water.)

Font Distinguisher

The font distinguisher stud should slide freely in its bearing. Undue binding will hinder its spring and lever from positioning it accurately. The lower lugs on the front and back plates of the distributor box can be bent to cause the font slots in the matrices to line up with the distinguisher point if the lower lugs of the matrices are not worn. Use dry graphite to lubricate the distinguisher stud.

In the case of older matrices with worn lower lugs the upper back distributor box rail must be depended upon to keep the matrix font distinguisher slots in line with the font distinguisher.

Mixer Primary Distributor Box

More accuracy is required in the adjustment of the mixer primary box than in the single distributor box. The upper rails must allow free passage of the matrices but a few thousandths too much play will cause the front plate upper rail spring to be inoperative. This is the flat spring riveted to the outside of the front upper rail and extends through a slot to the inside of the rail. The same rivets also hold the front plate upper rail spring (back).

The clearance between the two upper rails must allow even the thinnest matrix to fall quickly to the lower level of the top edges of the rail when the bridge slots in the matrix coincides with the bridge. But the clearance must be close enough to hold the matrix in line with the bridge and also to allow the front plate upper rail spring to exert a slight holding pressure on the matrix.

The front rail of the box can be bent very easily when removing the box from the machine and great care must be exercised to prevent it. If the front rail is bent inward slightly it will bind the matrices and prevent them dropping properly on the bridge. This will cause them to run into the lower instead of the upper magazine, or they will drop part way and move forward in that position and jam as they are about to engage the distributor bar.

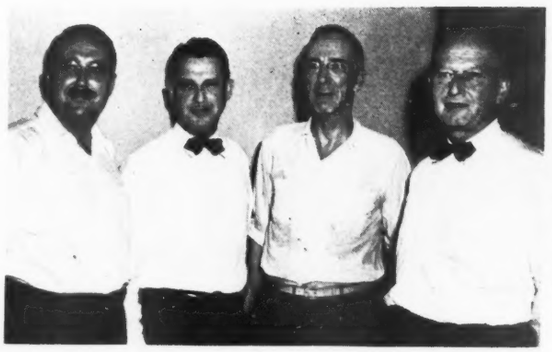
When certain bridges are used in the mixer primary box, particularly those which require a notch far from the center of the matrix and close to one or the other lower lugs, considerable trouble may be experienced. If the bridge can be selected before the matrices are bridge-notched, select a bridge with a combination as near the center of the matrix as possible. The trouble experienced with an off-center bridge notch is that matrices tend to twist as they drop on the bridge. This causes the rails to be forced farther apart and accentuates the trouble.

This trouble can be overcome by soldering or sweating an extension to the narrow lifting face of the matrix lift to make the face 0.100 in. wide instead of the original 0.040 in. to 0.043 in. Regrind the lifting surface flat and square and reset the stroke of the lift to raise the matrices slightly above the rails. The extension on the lifting face will support the matrix on its bottom and cause it to swing squarely toward the bridge.

(Concluded)

Goss Printing Press Co.

Purchases Duplex Plant



These four executives arranged the sale of the Duplex Printing Press Co. to the Goss Printing Press Co. They are left to right, Arthur P. Stone, Duplex vice president and secretary; R. C. Corlett, Goss president; I. K. Stone, Duplex president; and J. A. Riggs, Goss executive vice president and general manager.

THE Goss Printing Press Co. has purchased the manufacturing plant of the Duplex Printing Press Co., Battle Creek, Mich., according to a joint announcement by R. C. Corlett, president of the Goss Company, and I. K. Stone, executive head of Duplex. The Battle Creek plant will be run as the Duplex Division of Goss; executive offices will be located in Chicago.

A backlog of orders at the Goss Company, necessitating either the sub-contracting of work or expansion of facilities, directed the advisability of the purchase. Land and buildings of the Duplex Division comprising 13 acres is expected to provide ample facilities for manufacturing tubular and flatbed presses and stereotype equipment.

The Chicago Goss plant will be devoted to the construction of large rotary newspaper, magazine, rotogravure and multi-color presses. According to present plans the manufacture of all current models of Goss and Duplex presses and stereotype equipment will be continued. Repair and field service of all past and present models of equipment made by both companies will be maintained and handled as in the past.

Goss officials expect that by concentrating on heavy type equipment in Chicago the transfer of the manufacture of tubular and flatbed presses to the Battle Creek plant will require considerable expansion of the personnel employed at the latter plant. About 2,500 persons will be employed in both plants.

R. C. Corlett will continue as president of the Goss Company and J. A. Riggs as executive vice president and general manager. Other offieials are C. S. Crafts, vice president and chief engineer; W. T. Goss, vice president; C. S. Reilly, vice president and sales manager; F. G. Tuttle, secretary and works manager, and K. J. Williams, treasurer.

While the executive heads of the Duplex Division have not yet been named, it is expected that there will be no changes in the present personnel of the Duplex Division. Executive and general sales offices will be maintained in Chicago with branch offices in New York and San Francisco.

Newsprint De-inking Plant

Construction of a $500,000 plant to produce newsprint by de-inking old newspapers was started in October at Gary, Ind., it was announced by J. R. Snyder, publisher of the Gary *Post Tribune*. Six midwestern newspapers are associated in the new company in which Mr. Snyder is president. Other officers are Carl P. Slane, publisher of Peoria (Ill.) *Journal*, vice president; and F. Ward Just, general manager of Waukegan (Ill.) *News-Sun*, secretary and treasurer.

Moves Office

The Cline Electric Mfg. Co. has moved into larger space at 400 W. Madison St., in Chicago. This is the third move for the company in its 35 years of business. Branch offices are in the New York Daily News Bldg. and the Crocker National Bank Bldg. in San Francisco.

If you use type metals

look for This Name—here's why

Federated is first in variety and quality of metals, first in service, first in manufacturing and technical facilities for the graphic arts. ▶ Businesses or manufacturers become "largest in the country" not by accident but by plan. The Federated plan is to produce the finest metals for *every* graphic arts requirement, and back their users to the limit with unmatchable technical and research facilities. ▶ Federated Process Type Metals are produced to all specifications. Other Federated products are Copper Anodes and Electrotyper's Foil. ▶ Wherever *you* are, there is a Federated office —one of 25 throughout the country. To reach Federated consult your phone book or write *Federated Metals Division*, *American Smelting and Refining Company*, *120 Broadway, New York 5, New York.*

Federated METALS DIVISION
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JMLCOF-CTT

ITCA *holds meeting in Detroit—Constructive action taken with respect to industry's affairs—Association in healthy state*

THE 28th Annual Convention of the International Typographic Composition Association (formerly the International Trade Composition Association), was held at the Book-Cadillac Hotel in Detroit, Thursday, Friday and Saturday, August 28 to 30 inclusive. Out of a total of 304 member plants, 103 were represented by 128 proprietors, partners or delegated executives. The first convention session was opened by President Oscar Hoffman on Thursday morning, August 28. After the usual formal opening ceremonies and the reports of officers, two stated speakers were introduced. The first of these was MacD. Sinclair, Editor of *Printing Equipment Engineer* who spoke upon the subject *Competition Will Get You If You Don't Watch Out*. The speaker discussed the constantly growing number of typewriter-like machines which are doing substitute typesetting work throughout the country in lieu of regular composing room typesetting products. He showed a considerable variety of specimens, the type for which was executed by the Varityper and I.B.M. Proportional Spacing Typewriters. These jobs ran all the way from house organs, bulletins, educational text books, telephone directory, order blanks to the setting of complete newspaper composition. The speaker suggested that the trade composition industry could very well handle both types of composition and thus be in a position to control much of it so that it would be directed into regular typographic channels. He also discussed the 1947 catalog of *50 Books by Offset Lithography*, production for which was supervised by A. Albert Freeman of New York. The booklet was composed entirely on Intertype's new photo-typesetting machine. A number of copies of the booklet were distributed among the audience.

Talking upon the subject *The Practical Functions of Printing Education*, Byron C. Culver, Supervisor, School of Printing, Rochester Institute of Technology, discussed the problems associated with the training of young people to enter the printing industry both from the management and production standpoint.

At the Detroit Convention it was decided to change the name of the International Trade Composition Association to the International Typographic Composition Association inasmuch as the word "Trade" no longer conveyed any meaning because the greater part of the work executed by members of the Association consists of complete typographic units instead of loose composition in galley form for printers as was done formerly.

The Trade Customs and Practices Committee submitted to the convention for approval, a revision of the Trade Customs and Practices for the Composition Industry which was adapted unanimously. The new schedule contains references to a number of matters of service and customer relationships which were not included in the schedule in force up to now.

The Trade Customs and Practices Committee also submitted for approval, a 12-page "Guide for Estimating" which contained a complete description of the various classes of machine composition (Monotype and Linotype-Intertype), with the time penalties for each, and sections covering hand composition, linotab work, hand proofs, reproduction proofs, foundry lock-up, proof reading and the like.

Executive Director Frank M. Sherman, who is also chairman of the ITCA Advertising Committee, submitted for consideration a series of 12 business promotion and educational folders which will very shortly be submitted to the membership in a special bulletin with full information and a request for orders. Through the medium of these folders members of the ITCA can do promotional work among their individual customers.

The long standing topic of the Universal Type Specimen File for use by all members of the trade composition industry, was acted upon favorably. Sol Cantor, chairman of the Standard Specimen Book Committee was unable to attend the convention because of illness. His report was presented by Executive Director Sherman. Specimen cards (7½ in. wide by 5 in. high) showing all sizes from 6 pt. to 72 pt., were mounted on a display board to show ITCA members the manner in which type faces and sizes would be shown if the recommendations of the committee were adopted. All of the pertinent information about any one size of type face is contained on each card. It was pointed out that the recommendation of the committee with respect to the standardized method for showing type faces called for an entirely new method of displaying specimens of type faces and involved the use of a filing cabinet as a substitute for the specimen book which has been in traditional use in the composition industry and by printers from almost the beginning of time. It was pointed out that the adoption of the recommendation probably meant that five years of time and not less than $100,000 in money would be required to bring the proposal to a point where specimen cards showing all sizes of all the "bread-and-butter" types used in the trade would be available. Pledges from members to set the type and furnish an electrotype plate according to ITCA specifications of a definite number of machine set and hand set faces will be solicited from members. Approximately 40 members have indicated their willingness to set pages as suggested by the committee.

Sol Hess, typographic director of Lanston Monotype Machine Co., received an Award of Merit. Phil Mann of York Composition Co., York, Pa., and Edward H. Stuart of Pittsburgh, were each presented with a Certificate of Appreciation.

Officers and Directors Selected

The following officers and directors were selected. Only a few changes were made in the vice presidencies, apparently the officers' and directors' work having been satisfactory to the Association during the past year. The list is as follows:

Officers—Oscar Hoffman, President, St. Louis; Frederick H. Lutz, Vice President, Brookton, Mass.; John W. Shields, Treasurer, Bridgeport, Conn.; Frank M. Sherman, Secretary and Executive Director.

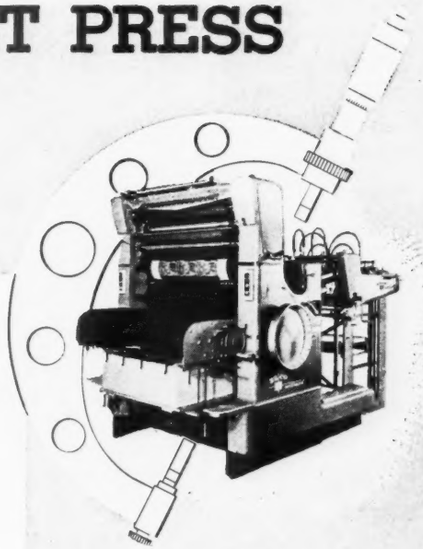
Regional Vice Presidents—William J. Scotland, Northeastern, Boston; Harold L. McGirr, Mid-Atlantic, New York; Frank H. Streifert, Southeastern, Miami, Fla.; O. B. Powell, Midwestern, Chicago; James A. Howe, Canadian, Toronto; Donald W. Canfield, Utica, N. Y.

Executive Committee—Joseph L. Baarlaer, Cincinnati; William L. Bremer, Pittsburgh; Sol M. Cantor, New York; J. R. Connell, Kansas City; Ed. T. Cooper, Toronto; Thomas P. Henry, Detroit; Herman L. Lewis, Jr., Detroit; Arthur J. Meyer, Philadelphia; Lester A. Neumann, Chicago; C. Ernest Osterland, Cleveland; Arthur S. Overbay, Indianapolis, Ind.; S. Walter Sears, Minneapolis, Minn.; Harry L. Smith, Rochester, N. Y.; Clyde B. Tryon, Omaha, Neb.

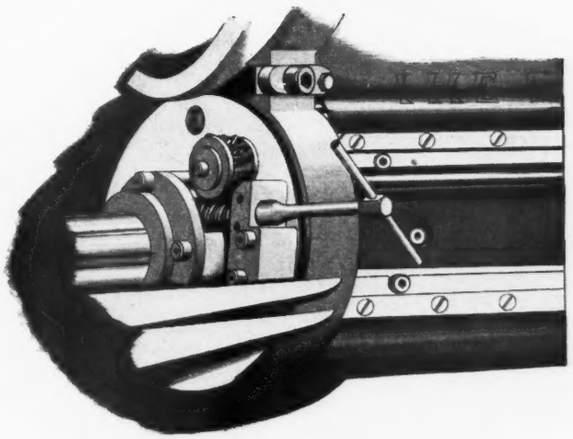
Improved Oxy-Dry Anti-Offset Sprayer

THE Oxy-Dry Sprayer Corp. is in production on the Oxy-Dry Anti-Offset Sprayer. A new feature incorporated into this machine is a larger electronic tube to explode the dry edible powder more thoroughly upon the freshly printed sheets. The larger electronic tube, it is claimed, tends to decrease static due to its increased electrical action. Another improvement claimed is a new style gear box which gives positive control of the amount of powder that is uniformly deposited on the sheets. This method for preventing offset with dry powder is effective on letterpress, offset and gravure, manufacturer states.

EBCO *willard* **OFFSET PRESS**



Registers with Lithographers



Simple "T" wrench operated worm and worm gear quickly provides proper tension for tightening blanket with little physical effort.

The EBCO *Willard* PRESS will be on display at the N.A.P.L. Convention —Hotel Book-Cadillac, Detroit, Michigan, October 22-23-24-25.

THIS IS ONLY ONE OF THE MANY IMPORTANT FEATURES

FOR COMPLETE DETAILS SEND FOR BOOKLET. CLIP THIS COUPON TO YOUR LETTERHEAD.

EBCO *willard*

PRINTING MACHINERY DIVISION
ELECTRIC BOAT COMPANY
445 PARK AVENUE, NEW YORK 22, NEW YORK

Constructive

was the program presented at Printing Industry of America convention in French Lick, Ind.—Results of association survey and report on research very interesting

Registration Was About 850

AN AGGRESSIVE and constructive program was presented to the approximately 850 registered business and management executives of the Printing Industry of America which met during the week of September 22 at French Lick Hotel, French Lick, Ind. Topics of immediate interest to the commercial printing industry were discussed thoroughly. Included were state of the commercial printing industry, research in cooperation with the Government Printing Office, participation in the program by the National Printing Equipment Association, cost system, and the open and closed shop divisions of the association.

Survey Report Reflects Conditions in Industry

An interesting and informative report covering opinions of 1200 members regarding the existing and future conditions in the industry was presented to the convention. The report was regarded as representative of the commercial printing industry as a whole since PIA includes in its membership some 75% of the volume of the industry.

Following is a brief summary of the resulting opinions of management executives as expressed in the report:

Future of Business

Nearly 90% of the members of the Association expect business conditions to be as good or better during the next 12 months as in the preceding year. On the question of the amount of business expected during the next 12 months, 470 members expect it to be greater; 468 about the same; and 130 expect it to decline. Printers are more optimistic about their own prospects than about general business conditions, where 260 expect an improvement; 593 expect it to be about the same, and 213 expect a decline.

The volume of work during the past 12 months as compared with the preceding 12 show that 669 have experienced an improvement; 286 find little change; whereas 96 experienced a decline.

As to the character of business competition, 515 replies found that there is a greater amount of "shopping around" by customers; whereas 529 felt it was about the same, and 51 felt it was less.

As to competition as general matter, 522 reported that competition is increasing; 515 have found it about the same; whereas 46 believed there was a decline. On price competition, 570 believed it was increasing, whereas 460 found it to be the same, and 46 reported a decline.

The question receiving the most number of replies was on current printing prices: 777 reported they were higher than last year; 281 said they were about the same and 24 reported a decline. As to the future of prices, 608 predict an advance; 520 believe there will be little change, while 89 expect a decline.

"Cut-throat" price competition which has been a peril in many industries apparently is beginning to show again, since 222 do see evidence of serious cut-throat competition. On the other hand, 835 do not regard it as a serious matter at this time.

Manpower Situation

Substantially more than 90% of the members of PIA reported that the attitude of their work forces is either good or satisfactory. Of a total of 1081 replies to the question on this matter, 582 said their work attitude was good, and 485 indicated that it was satisfactory.

More than half of the respondents are seeking additional production workers, and 75% of them say that additional manpower is hard to obtain.

Extent of employment in the industry is as follows: 672 companies report that their number of production workers is about the same as it was a year ago, whereas 342 have added workers, and 55 have reduced forces. The efforts of printers to meet the manpower situation is indicated by the fact that overtime is still extensively employed, 523 reporting it is about the same as a year ago, while 203 report it is greater, as against 356 who are now using less overtime.

On the matter of apprentices, 748 companies reported that they do have apprentices in training, while 160 stated they do not.

Expansion Plans

A large proportion of letterpress and offset members of PIA have expanded or plan to expand their production facilities. As to expansion which has occurred in the past year, 388 have increased facilities for composition, against 571 who have not; 531 companies have expanded press room facilities against 437 who have not; and 416 companies have expanded bindery facilities, whereas 488 have not; 294 companies plan to expand composition facilities; 473 plan press room expansion; 268 plan bindery expansion.

The situation in offset is similar. Expansion has already been undertaken by 278 companies in offset, and 310 plan future expansion.

As might be expected the trend in building facilities and remodeling is about the same. Expansion of building facilities has already occurred in 300 companies; 316 are planning to expand facilities; 404 have already done extensive remodeling.

Selling

Increased selling efforts in the industry is indicated by the survey. Asked if the selling effort they are now making to get business is greater, about the same, or less, than in previous months, 490 reported that they were using more effort in this field; 529 said about the same, while only 63 said they were making less effort.

The effect of this increased selling effort is indicated by other questions showing that 515 out of 1095 find customers are "shopping around" more than in the past, whereas 529 find this

(*Continued on Page 66*)

Accuracy that shows up in print

ALL cylinders of the new E.B. CO Willard Offset Press are mounted on preloaded Timken tapered roller bearings, with these advantages:

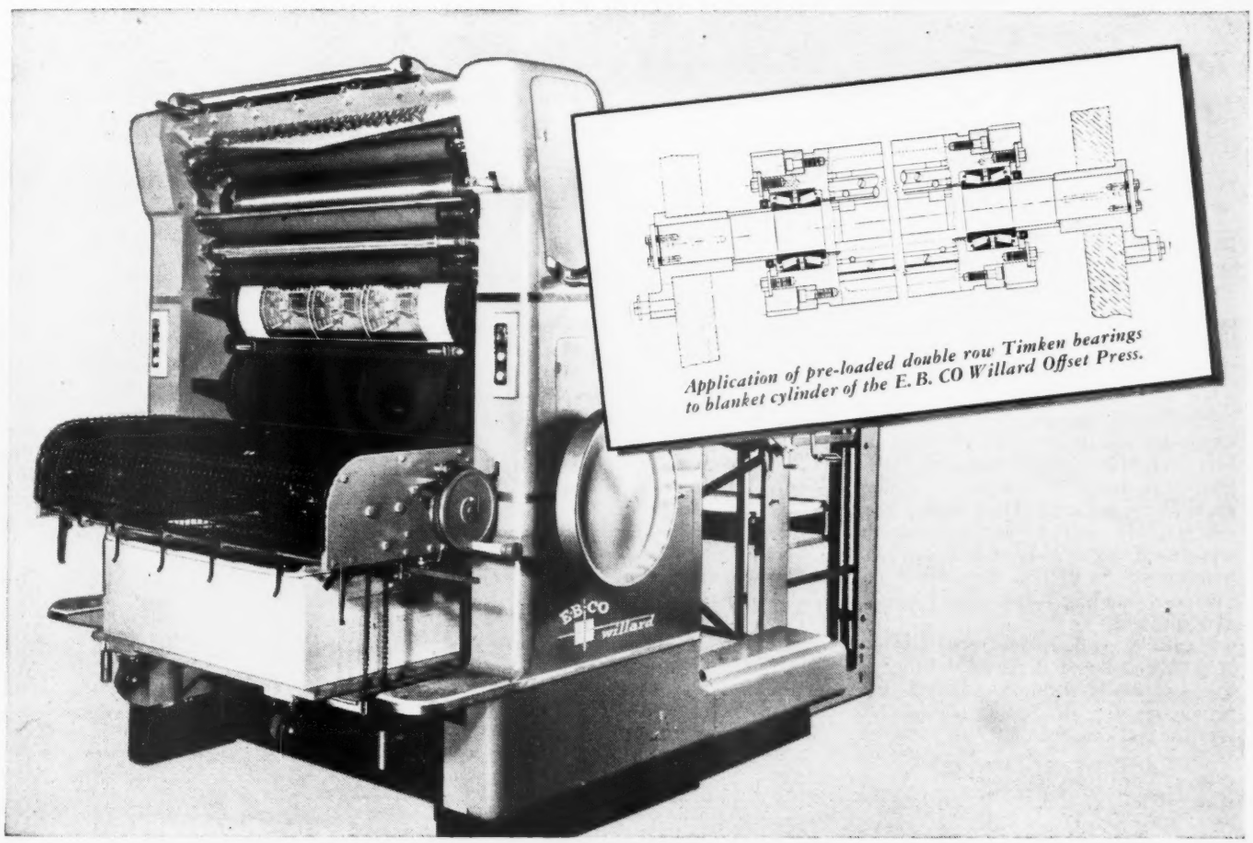
Timken roller bearings on printing press cylinders eliminate all speed restrictions due to bearings. They save power and prevent wear. By simplifying lubrication they reduce maintenance costs. And, most important, Timken bearings keep cylinders permanently aligned to assure fine quality printing.

Timken bearings are made from heat-treated Timken fine alloy steel to last the life of the press. They are manufactured to the highest standards of precision. Surfaces of rolls and races are incredibly smooth, helping assure minimum friction. Tapered construction carries both radial and thrust loads in any combination. And the load is spread evenly over a line of contact between rolls and races, providing maximum capacity.

Remember, no other bearing can give you *all* the advantages you get with Timken bearings. Look for them in printing equipment wherever long lasting precision is a factor. The Timken Roller Bearing Company, Canton 6, Ohio.

TIMKEN BEARING EQUIPPED

This symbol on a product means its bearings are the best.



Application of pre-loaded double row Timken bearings to blanket cylinder of the E. B. CO Willard Offset Press.

WE MAKE OUR OWN STEEL

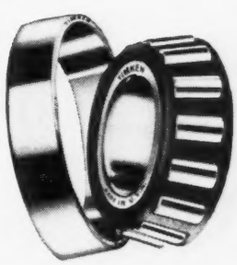
The special grade alloy steel which gives Timken bearings their strength and resistance to wear, is made in our own steel mills. It's the only way to positively assure uniformly high quality.

Timken is the only bearing manufacturer which makes its own steel, and leads in: 1. advanced design; 2. precision manufacturing; 3. rigid quality control; 4. special analysis steels.

TIMKEN

TRADE MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS



NOT JUST A BALL ○ NOT JUST A ROLLER ▭ THE TIMKEN TAPERED ROLLER ▭ BEARING TAKES RADIAL ◎ AND THRUST →◎← LOADS OR ANY COMBINATION ✳

Engineered by the Austin Company and constructed by Bechtel Corporation, the new plant of Pacific Press, Inc., sprawls over five acres of a 15 acre tract in Los Angeles, Calif. There are about 230,000 sq. ft. of floor space in the building. Second floor is used for offices. A spur from Union Pacific railroad permits bringing in the paper stock and to ship it out after processing.

New Home of Pacific Press in Los Angeles will be supplied with much new equipment for publication and general commercial printing

THE new home of Pacific Press, Inc., 5201 South Soto St. (Vernon), Los Angeles, Calif., is located on part of a 15 acre tract. The building covers approximately 5 acres. The building itself is a single story structure with the exception of the second floor office area. There are about 230,000 sq. ft. of floor space in the building. The building itself cost slightly over $2 million and the equipment represents additional expenditure of $4 million. Employment in the new building totals approximately 1100 people.

Pacific Press activities in the Graphic Arts are designed to be well rounded. Some of the publications handled there are the western editions of *Time* and *Life*, and the full editions of *Sunset*, *Westways*, *Western Livestock Journal*, *Fortnight* and others. The firm also executes general commercial printing by letterpress and offset-lith, binding, mailing, photo-engraving, electrotyping and typography.

A cafeteria is incorporated in the building. It has a capacity of 250 diners at one time and is operated 24 hours a day, seven days a week, since plant operations are full time.

The plant layout was engineered by the Austin Company. Building constructed by Bechtel Corporation.

The plant is served by a Union Pacific spur track. The warehouse area has a storage capacity of approx. 6500 T. of paper. An overhead traveling crane facilitates handling paper stock.

The Mechanical Departments

In the 16 machine composing room, four of the machines are equipped with Teletypesetters for publication work. The photo-engraving and offset-lith platemaking departments have been expanded. The electrotype foundry is operated by the Reilly Plastictype Div. of Electrographic Corporation.

The pressroom equipment is ample to handle the variety of work coming into the plant. In the rotary pressroom will be housed a double octuple Hoe newspaper press; also three 64-page 2-color Hoe magazine presses; there will also be a 64-page 2-color high-speed Faeber-Dutro web offset press. The latter is made up of four perfecting units with a double magazine folder and two paper reels with automatic pasters and tension; for 64 pages in two colors, two webs wil be run through the press, each web running through two units to produce the two colors; for 32 pages in four colors, one web is the capacity of the press running through all four units to produce the four colors. This latter press is a new type of high-speed web offset press being built by Joshua Hendy Iron Works.

In the letterpress commercial pressroom will be contained two Cottrell 5-color presses, a Miehle 2-color press, and a number of single-color sheet-fed cylinder presses in various sizes.

The offset pressroom will house two large Miehle 2-color presses and two single-color presses; in addition, there will be a 6-color dry offset web press which was designed and made by Orville Dutro.

In the bindery, the equipment will take care of volume production. There will be three 20-pocket Sheridan inserting, stitching and single book trimming combinations. Also there will be two McCain inserting machines which are of different design than the Sheridan machines but accomplish the same results; up to 20 signatures can be inserted to produce saddle stitched magazines or booklets. In order to expedite delivery, the McCain machines were built by Joshua Hendy Iron Works, because of McCain's backlog of orders. There will also be installed a high-speed Sheridan 30-pocket side-gathering, side-stitching, glued-covering or perfect binding machine. A variety of special folders, cutters and other bindery accessories will also be installed. Trim waste from all machines will be conveyed by pneumatic system directly to the baling room.

Among the mailing facilities will be included high-speed Cheshire mailers; these machines are geared to handle from 9000 to 18,000 copies of all sizes of magazines and newspapers.

Catching On at Watervliet

One of the desirable personnel activities of companies of any size at all is to size upon every means for fostering goodwill relationships between management and labor. When a company reaches a certain bigness (in terms of employees) the organization is apt to and does become impersonal.

The Watervliet Paper Co., Watervliet, Mich., has published a new edition of its personnel booklet. It is entitled *Catching On at Watervliet*. It is 5 in. by 7 in. size and consists of 32 pages and cover. The booklet is well illustrated. In addition to informing employees (both new and old) what is made by the company, how it is made, the rules and other pertinent data usually found in such manuals, a section containing portraits and short biographical sketches of the executive personnel are included. These men, mostly, have been promoted from the ranks. In fact, such promotions seem to be an integral part of company policy. The text of the booklet is written in friendly manner.

398 daily newspapers -in 42 states-

accept r.o.p. color advertising

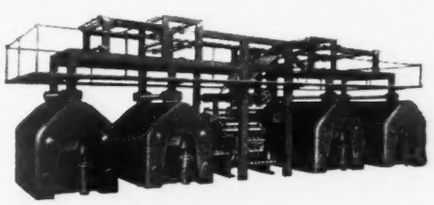
"This is an age of color! Your readers, through long association with advertising in national magazines, direct mail, and billboards, have come to expect and demand color in their newspaper advertising."

A report on "Color Advertising in Newspapers," by the Committee on Color Advertising of the Newspaper Advertising Executives Association, shows that even last year 398 newspapers, in 42 states, were accepting run-of-paper color advertising in daily editions.

Of these newspapers, 146 were equipped to print two colors in addition to black, and 83 three colors and black.

With the rapidly increasing demand for color advertising, your next press should be designed to meet greater color requirements as they arise.

Keeping pace with this development, the new Hoe Color-Convertible Newspaper Press is pre-engineered so that color may be added *whenever* and *wherever* you want it — quickly — easily — economically.



R. HOE & CO., INC.

910 East 138th Street, New York 54, N. Y.
BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO

Summation of the possibilities for developing improved techniques in printing newspaper color supplements by web offset-lith—Problems enumerated by LTF Web Offset-lith Committee

A REALISTIC attitude respecting the development of techniques for printing newspaper supplements by web offset-lith is in evidence in the report of the Lithographic Technical Foundation's Special Web Offset Committee. The Committee discussed the subject at the time of the Foundation's annual meeting in Saranac, N. Y., recently. The Committee was appointed by LTF for the purpose of determining the proper research approach to the problems associated with the printing of newspaper supplements by web offset.

Recommends Study of Photo-typesetting Techniques

It was generally agreed by the Committee that there are a number of problems to be overcome with respect to newspape supplement printing. Because of inadequate knowledge, these basic problems should be thoroughly understood in order to establish the points where technological development should begin. One member of the Committee suggested a study should be undertaken to show the comparative basic production costs and time relationship among the typographic, lithographic and gravure processes. From the results of such a study the economic position of offset-lith for newspaper production could more easily be judged. It was also suggested by this Committee member that a study should be undertaken of the advantages, economics and the limitations of photo-typesetting composition to determine to what extent photo-typesetting can close the gap which now exists between the typographic and photo-mechanical techniques in newspaper production. This Committee member admitted, however, that such study may not be possible until photo-typesetting machines can be made more generally available for actual production work.

Plates for Long Runs Needed

Another Committee member asserted that all of the shortcomings of the standard sheet-fed press are present and are aggravated by the increased production speed of the roll-fed press. "Perhaps the most pressing technical need," he said, "is the matter of plates of better quality and which will yield long runs. We need plates that will give runs up to 2 or 3 million impressions without replacement. These plates should run as dry as possible and preferably would not use water. There is urgent need for a good groundwood paper made for periodical work on offset equipment. This paper must be comparable in cost to sheets now in use in the letterpress industry."

This Committee member also stated: "One real problem in the production of periodicals by offset is the extremely unfavorable position of offset inks cost-wise when compared to the costs of letterpress inks." He felt that the per-pound cost will probably remain above the per-pound cost of letterpress inks—but the inks should go a little farther than the letterpress inks.

Letterpress Heat-Set Inks May Deter Offset Development

Another member of the Committee, in analyzing the newspaper supplement printing field, referred to the recently developed letterpress heat-set inks using the same labor methods and routine. He thinks these may be a deterrent in enabling offset to offer a process which will enable the newspaper to print supplements at "certainly no more money".

His summation of the situation is as follows:

"At the moment web offset is primarily applicable to the printing of newspaper supplements rather than run-of-paper printing. Supplements are a once-a-week printing job, with weekly rather than daily or hourly deadlines. Newspaper publishers are alive to better color. Now, these publishers can't make full use of the color advertising offered them because of paper and equipment inadequacies. Both will correct themselves in time, by which time web offset, at satisfactory speeds and with long enough plate life will no doubt have been developed.

"However, these publishers are very cost-conscious and speed-conscious, extreme quality being secondary to getting out the paper on time, with four colors at not too great a premium over their run-of-paper in cost.

"The cost of offset equipment is probably of no greater importance than the danger, trouble and confusion of adding an *additional* process with its new technique, personnel, training, etc., and the resultant conflict and confusion within the papers' own mechanical departments. Primary cost and new labor problems will probably deter most publishers from hurrying into web offset in their own plants.

"Supplements printed outside the newspaper plants today are primarily gravure or letterpress magazines or color comics. Most of the larger papers, perhaps a hundred, print their own comics by letterpress. Another 100 or 150 have them printed by readyprinters. The printers' quality is generally better than the average home-prints, but to the advertiser the average quality is of utmost importance.

"Rotogravure sections and roto magazine sections are largely printed by outside printers and while generally of the best newspaper quality are also relatively expensive.

"In all newspaper supplement advertising (and I refer primarily to four colors) the advertiser is seeking not only quality but also uniformity of reproduction. He will accept the limitations of the medium, but requires uniformity within these limits. To achieve both, a constant improvement and uniformity, newspaper advertisers furnish to each printing plant uniform printing material which is standardized, specify standardized inks and ship their material from centralized services created for this purpose of serving, and acting as liasion between advertiser and printer. Thus printers starting on an even basis are required to print well or suffer by comparison.

"Present developments in letterpress heat-set inks (if successful) may well cool the publishers' enthusiasm for offset for a long period. If gloss surface-lay inks can be developed to use on existing (or ordered) equipment at a very small mechanical cost for adaptation, using the same labor methods and routine, it will no doubt be far more attractive to newspapers generally than new presses, equipment, methods, techniques and labor.

"Therefore, until offset printers are ready to meet newspaper deadlines with shorter and shorter closing dates, offer a better quality for certainly no more money and among the printers achieve a uniformity of printing quality, including inks, etc., the medium is not ready for the market. And while offset is readying itself, heat-set inks may well make the ultimate advantage of offset hard to show clearly to the customer."

Folder Available

A 16-PAGE folder in two colors has been issued by the Shaw Machine and Tool Co. In the folder are described Smatco products for stereotyping. Mat moisteners and trimmers, curved and flat scorchers, curved and flat routers, from tables, flat casting boxes, etc., are listed. Copies of the folder may be secured upon request to *Printing Equipment Engineer*.

Instrument Bulletins

THE Taber Instrument Corp. has issued two bulletins, the first No. 4506, illustrates and describes the V-5 Stiffness Gauge. It is 6-pages, 10½ in. by 7¾ in. The gauge is used to determine stiffness and resilient qualities of materials. The second bulletin, in which is described the Taber Abrasor, is 8½ in. by 11 in., is illustrated in four colors. The Abrasor is used to reveal surface wear due to rubbing abrasion and can give the potential wearability of materials and surfaces. Copies of the bulletins may be secured upon request to *Printing Equipment Engineer*.

Patents

For The Graphic Arts Field

Covering patents issued August 12, August 19, August 26, September 2, September 9.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issuing each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating

During the five weeks covered by this report, no patents have been issued for this heading.

Composing Room Equipment

2,426,146. APPARATUS FOR PRODUCING JUSTIFIED TYPE MATTER is designed for use with the composing machine disclosed in patent 2,395,695 that sets lines entirely photographically and is related to apparatus disclosed in earlier photo-composing patent 2,391,021. Primary means adjust the length of the composed line of elements by distributing a limited portion of the line shortage only among the word spaces to be produced, and secondary means adjust the length of the composed line by distributing the remaining portion of the line shortage among the characters as well as the word spaces produced in amounts, for each character and word space, determined by the setwise width of the element from which it is reproduced. Wordspace elements are provided instead of the usual "spacebands" employed in casting machines. These elements are stored in extra channels in the storage magazine for the character elements. At least one set of teeth in a V-shaped upper end of their sleeve members facilitates circulating the space elements after use through distributing devices for return thereby to their particular storage channels. The sliding wedge of the spacer is split longitudinally from its upper end to a short distance from its lower end. When the wedge is assembled in the usual undercut grooves provided for it in the sleeve member, the two parts bindingly engage one another in different relative positions of adjustment. Invented by Herman R. Freund, Brooklyn, N. Y. Assigned to Intertype Corp., Brooklyn, N. Y. Application July 9, 1946. 23 claims.

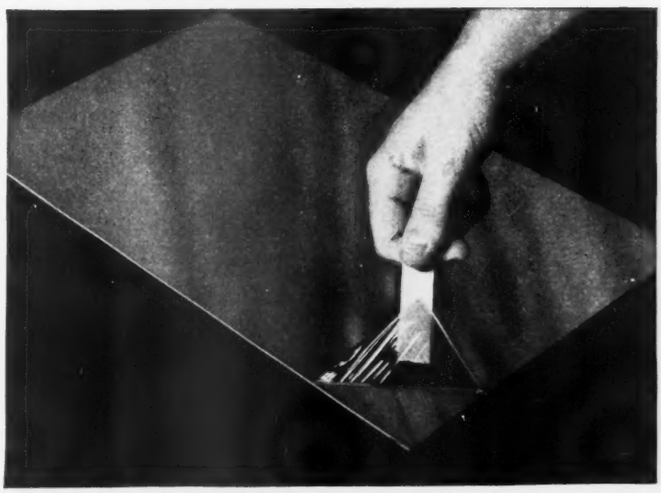
2,426,166. SLUG CASTING MACHINE is equipped with a slotted mold slidably mounted in guideways and moving during each cycle of operation to the casting station, in the opposite direction to the ejecting station, and finally to a neutral position where it is cooled. Before cycle of machine starts, a hand stick with its composed line of matrices is pushed endwise into a horizontal receptacle against a stop which locates the matrix line properly with respect to the end walls of the mold slot. Mold is of less than standard height and the matrices, whose characters range in size from 6 pt. to 72 pt., are formed in their casting edges with routing notches of a depth to compensate for the reduced height of the mold, so that the cast slugs will be of the required "type height." Invented by Harold A. Burt, St. Albans, N. Y. Assigned to Mergenthaler Linotype Co., Brooklyn, N. Y. Application July 16, 1942. 27 claims.

2,426,727. TYPE SLUG END CUTTER trims type slugs as they issue from a line casting machine so that all slugs will be square, parallel with each other, and of equal length. A pair of spaced saws are driven by a single shaft. There is a guard housing for each saw and each guard also embraces the shaft. A mandrel for each saw is splined to the shaft for longitudinal adjustment and a thrust bearing is interposed between each mandrel and the saw guard. Housings for the bearings are carried by the saw guards and are of sufficiently greater diameter than the bearings to accommodate them if the guards are slightly eccentric to the shaft. Invented by Charles W. Curle, San Francisco, Theodore C. Curle, Ross, and Ray F. Newton, San Francisco, Calif. Unassigned. Original application October 31, 1941, now Patent No. 2,369,947. Divided and this application January 16, 1945. 3 claims.

Announcing

a NEW ADVANCE in engraving plate PROTECTION

FACEKOTE



Attaching a small piece of adhesive tape to Facekote makes peeling easy.

Seals Completely . . . Peels Easily . . . Eliminates Spoilage

FACEKOTE is a new, skin-like coating, applied at the mill, to protect the surface of your sheets of Zomo Electric Zinc, A-Z Alloy, and Zomag (Dowmetal).

Facekote clings tightly to the surface of your plates, hermetically sealing them against moisture, grime, and grease. You simply shear or saw Facekoted plates to the desired size . . . then peel the Facekote from the piece to be used *just before preparing it for the top.* Balance of the plate can be safely stored.

With Facekote, air-etching and costly corrosive losses are eliminated. And, there's no finger-marking or smudging cut-off pieces. A great convenience . . . an important saving.

Ask your regular metal supplier for Zomo Electric Zinc, A-Z Alloy and Zomag, protected by Facekote.

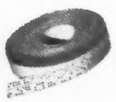
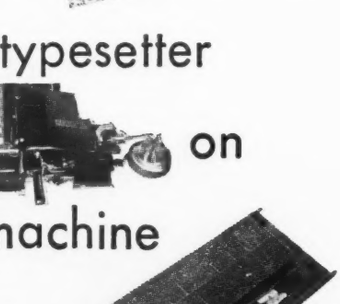
ZOMO ELECTRIC ZINC ◆ A-Z ELECTRIC ALLOY

Feeding, Folding and Delivery

2,425,936. FLEXIBLE-SHEET CONVEYER, for taking folded or unfolded sheets of paper from a pile and conveying them to a device for further treatment, has a frame with a rotatable cylindrical member that forms a bottom for the stack of sheets. A gripping roll is eccentrically mounted on the frame, located on a common circle with a set of rollers also circumferentially mounted on the frame. Gear wheels are connected respectively with the gripping roll and rollers, and mesh with a stationary internal gear. A notch, at the part of the circumference of the gripping roll which meets the front edge of the bottom sheet of a stack, has an inwardly curved wall adapted to be engaged by the front part of the sheet. Suction means open through the curved wall of the notch for gripping the front edge of the sheet. Invented by Rudolph Hepp, Berlin, Germany. Vested in the Attorney General of the United States. Application April 17, 1942. In Germany April 25, 1939. 4 claims.

2,427,223. SHEET CUTTING and DELIVERY APPARATUS, more especially for receiving a continuously traveling web of paper board from a paper making machine. The apparatus cuts the web into sheets of desired sizes and stacks the cut sheets. It comprises five main units, namely, a web slitting and cutting unit, a carrier, a throw-out table, a lay boy and a sheet catchers platform. Cut sheets from the web slitting unit are delivered to vertically adjustable tables which provide for stacks of considerable height and eliminate the necessity for frequent shifting of the sheet receiving means. Sheet receiving tables are carried by a lay boy adjustable transversely of the carrier so as to bring either of two tables into sheet receiving position. The throw-out table is also adjustable transversely. Hence, it is possible to direct sheets from the carrier to the throw-out table during shifting of the lay boy, so that discharge of sheets from the continuously operating apparatus to the floor is avoided. Invented by Lawrence A. Moore, Elkhart, Ind. Assigned to American Coating Mills, Inc., Elkhart, Ind. Application December 4, 1944. 41 claims.

How to set MORE TYPE in LESS TIME

Punch a tape on your Teletypesetter Perforator Unit ... feed the  roll of tape into the Teletypesetter Operating Unit on your composing machine ... and watch your galleys fill up  at 350 to 400 lines per hour!

For full information, write to
TELETYPESETTER CORPORATION
1400 Wrightwood Ave., Chicago 14, Ill.

TELETYPESETTER
REG. U. S. PAT. OFFICE

Plate Making

2,425,580. REGISTERING AND TRIMMING OF MULTI-COLOR PRINTING PLATES is accomplished by a single operator without tying up presses or personnel. The mechanism used has a curved stereotype plate support and a plate carrier that is mounted on a fixed frame to rotate about an axis. A printing plate, which is to serve as the key plate, is secured to the plate carrier of the machine. After adjusting four pointers of the machine to the register desired, the carrier is rotated to bring plate into contact with a rotating cutter which trims the longitudinal side edge of the plate. Other rotating cutters trim the two end edges of the plate. The key plate is then removed without disturbing the pointers and the same procedure is followed for the remaining plates which are to be in the same register. Invented by Isidor Tornberg and Charles L. Ricards, Plainfield, N. J. Assigned to Wood Newspaper Machinery Corp., Plainfield, N. J. Application November 4, 1943. 4 claims.

Printing Inks and Related Chemicals

2,425,926. LEAD RESINATES USEFUL IN PRINTING INKS, paints and varnishes, etc., are obtained by fusing a heat treated rosin with a sufficient amount of a lead compound capable of reaction with the rosin to give the required combining proportion of lead. In an example, N wood rosin was heated at 310° to 315° C. until the optical rotation reached plus 40°. Then 350 parts by weight of the heat-treated rosin were melted and heated to 230° C. and 440 parts of lead acetate were added. Heating was continued for 35 minutes, the temperature being raised slowly to a maximum of 260° C. Invented by Herschel A. Elliott, Wilmington, Del. Assigned to Hercules Powder Company, Wilmington, Del. Application September 4, 1941. 12 claims.

2,426,194. PRINTING INK is formed by a combination of 90 parts by weight of butyl carbitol, 10 parts printing ink varnish, 0.2 per cent by weight of "Aerosol O. T." or dioctyl sodium succinate and 10 per cent by weight of methyl violet, the percentages being of the combined solvents. The varnish, of the type usually used consisting of rosin and other gums together with linseed oil or the like, acts in this ink as a moisture-proofing agent and decreases the degree of "feathering" of the printed characters. Invented by Adolph Fischback and Maurice Fried-

man, Asbury Park, N. J. Assigned to the United States of America, as represented by the Secretary of War. Application April 4, 1944. 2 claims.

2,426,248. MANUFACTURE OF CARBON TRANSFER INK includes the step of intermixing an oxidized vegetable wax, which contains fatty acids of chain lengths of from 20 to 30 carbon atoms, into carbon black in oil. An increase in the dispersion of the carbon black is produced, resulting in increased fluidity of the product. Invented by Nathan Sugarman, Dayton, O. Assigned to The Standard Register Co., Dayton, O. Application July 1, 1944. 13 claims.

2,426,576. CHLORINATED-ALIPHATIC ETHER OF AMINO-DIPHENYLAMINES are prepared by reacting 4'-hydroxy-4-nitro diphenylamine or its 2-sulfonic acid derivative with an ester of the halogen containing alkoxy compounds, such as aliphatic halogen atoms or halogen containing aliphatic esters of organic or inorganic acids. A printing paste is prepared by dissolving 2 parts of blended diazonium chloride in 28 parts of water and adding 75 parts of a suitable starch thickener. This paste is transferred to cotton piece goods which have been previously impregnated in an alkaline grounding liquor of the anilide of 2-hydroxy-3-naphthoic acid. The print is dried at elevated temperature and is cleared by heating at 70° C. in a dilute soda ash solution; it is then soaped at the boil, rinsed and dried. The pattern is printed in a heavy blue of superior fastness. Invented by John P. Goulding, Neshanic Station, Robert P. Parker, Somerville, and John J. Denton, Bound Brook, N. J. Assigned to American Cynamid Co., New York, N. Y. Application July 3, 1944. 8 claims.

2,427,255. ARTIFICIAL WAXES disclosed in this patent are useful in printing inks, both as vehicles and as offset preventing waxes. The wax consists essentially of the reaction product of stearic acid, maleic anhydride and a polyhydric alcohol selected from the group consisting of pentaerythritol, polypentaerythritols and mixtures thereof. The polyhydric alcohol is completely esterified by the acids in the proportion of 0.75 equivalent of stearic acid and 0.25 equivalent of maleic anhydride for each equivalent of the polyhydric alcohol. Invented by Harry Burrell, Paramus, N. J., Philip I. Bowman, Syracuse, N. Y., and Robert H. Barth, Ridgewood, N. J. Assigned by mesne assignments to Hayden Chemical Corp., New York, N. Y. Application July 28, 1942. 10 claims.

Printing Presses and Equipment

2,425,529. INKING MECHANISM FOR PRINTING PRESSES includes a fountain roller and a number of rolls for transferring ink to the printing plates of the press. A pick-up roller is normally in contact with the fountain roller and with one roll of the number of rolls. Mechanism is adapted to manual actuation for removing the pick-up roller from contact with fountain roller at any desired time. An eccentric mounting for the pick-up roller is actuated to rock the pick-up roller away from the fountain roller. The roller and rolls are mounted in an inker carriage for movement toward and away from a printing cylinder to be inked. Means actuated by the movement of the carriage moves the eccentric mounting to rock the pick-up roller into contact with the fountain roller. Invented by Charles Alonzo Harless, Oak Park, Ill. Assigned to The Goss Printing Press Co., Chicago, Ill. Application September 14, 1944. 11 claims.

2,425,643. WATER FOUNTAIN for a printing press includes special driving mechanism for rotating the fountain rollers and for shifting the ductor roller. An object is to practically eliminate vibration in the pan roller of the water fountain and the consequent agitation and slopping of water out of the pan, as well as reduction or elimination of vibration of the cam shaft and consequently of the ductor roller. It also facilitates changes in speeds of the pan roller and the ductor operating cam shaft with respect to the plate roller of the press, as well as changes in the speeds of pan roller and the ductor cam shaft with respect to each other. The arrangement includes an intermediate roller adapted to turn with a surface speed substantially equal to the surface speed of the form cylinder of a water fountain. A pan roller and a ductor roller are included, and a cam shaft moves the ductor roller into engagement with the intermediate roller and pan roller alternately, a transmission shaft being disposed at right angles to the axis of the rollers. Separate worm and worm wheel connections drive the transmission shaft from the intermediate roller and drive the pan roller and the cam shaft in-

New Folder **NOW READY! Tells**

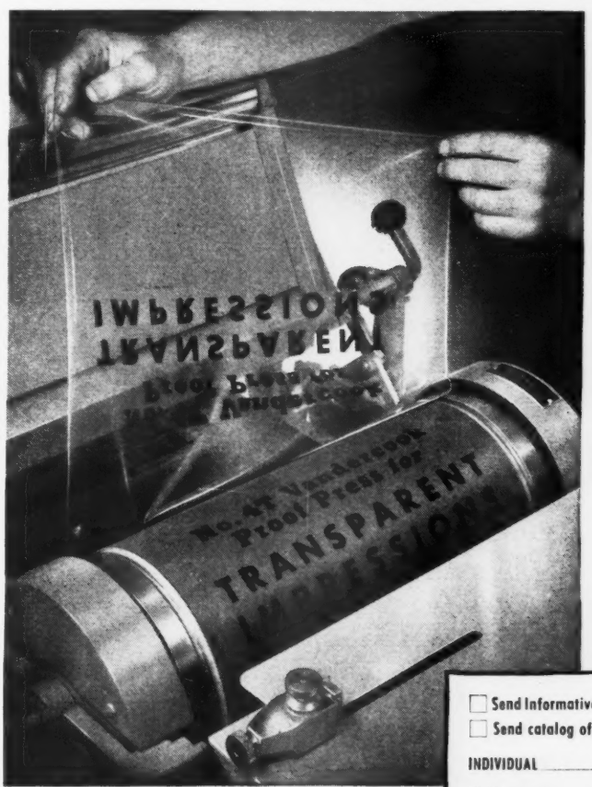
How To Make Transparent Impressions

Pulling proofs on either cellophane or glassine is just as easy as making black and white proofs when you have the necessary equipment and follow simple instructions. In fact, with the No. 4T Vandercook, you can make either transparent, reproduction, or regular proofs. The transparencies—printed on both sides from either type or halftones—are used in the production of lithographic plates and rotogravure cylinders. Full information gladly mailed upon request.

VANDERCOOK PREMAKEREADY EQUIPMENT

VANDERCOOK & SONS, INC.

General Offices: 914 North Kilpatrick Avenue • Chicago 51, Illinois



SPECIFICATIONS

No. 4T Vandercook Proof Press

Bed Size.....15"x 35"
Max. Sheet . 14¾"x 20"
Max. Form.... 14"x 18"
Floor Space..2'2"x 6'6"

Illustration shows cellophane proof being removed from cylinder.

Mail Coupon

☐ Send Informative Booklet on No.4T Vandercook
☐ Send catalog of all Vandercook Proof Presses

INDIVIDUAL _____

FIRM _____

ADDRESS _____

CITY _____ ZONE ____ STATE ____

dependently from the transmission shaft. Invented by Arthur G. Royer, East Cleveland, O. Assigned to Harris-Seybold Co., Cleveland, O. Application October 1, 1942. 8 claims.

2,425,680. ROTARY MULTI-COLOR PRINTING PRESS ARRANGEMENT provides spaced operating units with head-high, floor-level working space between them which is accessible to a pressman from at least one side of the machine unit. The sheets are carried in accurate register from one unit to the next and are supported in the space by air devices which also serve to dry the ink. There is a flexible endless conveyor having sheet grippers for conveying sheets from one unit to the next and which includes mechanism for registering the sheet grippers first with one unit and then with the other. A resilient support tautens the advancing and returning runs of the conveyor and is adapted to permit either shortening or lengthening of the runs under the influence of the registering mechanism while maintaining both runs taut. Invented by Christen R. Kaddeland, Shelton, Conn. Assigned to Harris-Seybold Co., Cleveland, O. Application September 4, 1941. 33 claims.

2,425,914. PRINTING REGISTER ADJUSTING APPARATUS is for a rotatable cylinder secured to a driven shaft and arranged to be rotated by a drive gear. The mechanism, which changes both the axial and rotary positions of the cylinder, includes two concentric housings, the outer of which is connected to the shaft for rotation with it. The inner housing is mounted for free endwise movement on, and for rotation with, the shaft and for spiral movement relative to the outer housing. By one hand wheel, the inner housing is adjustable in endwise direction to rotatably adjust the cylinder. Another hand wheel connected to the outer housing adjusts the cylinder in an axial direction. Invented by James L. Blackley and William P. V. Ross, Battle Creek, Mich. Assigned to The Duplex Printing Press Co., Battle Creek, Mich. Application March 23, 1944. 24 claims.

2,425,920. FLAT BED ROLL-FED WEB PERFECTING PRESS is especially designed for use by publishers of daily newspapers in small towns. It has a stationary bed and a travelling impression cylinder with a pair of pendulum swinging bars coacting with the cylinder to turn the paper web. The bars are suspended from a horizontal shaft above the printing couples, loosely pivoted at their upper ends to the shaft and having their lower ends loosely connected with the impression cylinder journals. The pair of turning bars are arranged directly above the impression cylinder and type bed directly above the printing couples. A driven web feed roll is adjacent the turning bars, the advancing web being fed to the bars before the web is turned over, the same roll receiving and advancing the web back to the impression cylinder after it is turned over. Invented by Paul F. Cox, Los Angeles, Calif. Unassigned. Application April 6, 1944. 15 claims.

2,426,401. APPARATUS FOR JACKETING LITHOGRAPH ROLLERS with tubular fabric, such as "Molleton," saves the time now required for stitching and fitting such covers. Two brackets are mounted on the base of the apparatus, one bing aligned with and connected to the other by means of a fixed guide bar. A mandrel having a head and an elongated hollow resilient body is removably mounted on the second bracket, its body extending through an aperture in the bracket. The mandrel is internally dimensioned for a snug telescopic fit with the lithographic roller and externally dimensioned to receive the fabric sleeve to be fitted on the roller. A pusher on the guide bar is adapted to engage one end of the lithographic roller for forcing the roller through the mandrel and thus strip the sleeve off the mandrel onto the roller. Invented by Norman A. Mack, Riverside, Ill. Assigned to Roberts & Porter, Inc., Chicago, Ill. Application August 18, 1945. 8 claims.

behind Burgess Quality

Automatic controls, laboratory tests and inspections are employed during every step of the manufacture of Burgess Chrome Mats. Final proof of Burgess quality, however, lies in the ability of these mats to do what the stereotyper demands . . . to do it well every time.

A Laboratory Product
BURGESS Chrome MATS

That's why final proof depends on performance under working conditions and that's why sample mats are given a shop test before approval. The forms used are tough ones, as tough as any in actual use. Satisfactory performance on the mat press is part of the proof "behind Burgess quality."

BURGESS CELLULOSE COMPANY
Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats
FREEPORT, ILLINOIS
Pacific Coast Representative RALPH LEBER CO., 426 Polson Bldg., SEATTLE, WASH.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D. C.

Builds Ink Plant

A new printing ink plant will be built on a 16 acre site recently purchased in McCook, Ill., by J. M. Huber Corp. of New York, it was announced by Joseph S. Hart, vice president. The plant will produce 25 million lbs. of ink annually and will cost over $500,000. It will go into operation next spring.

Quick Reference Guide

26 CHRISTENSEN-DEXTER *Basic Machines for...*

FEEDING – CHRISTENSEN CONTINUOUS STREAM FEEDER – For flat bed, rotary and offset presses and varnishing machines where high speed is essential.

DEXTER CONTINUOUS RELOADING CARDBOARD FEEDER – Will feed cardboard up to forty point thickness, to any make flat bed or rotary press, cutter or creaser, and to certain offset presses, in sheet sizes up to the maximum capacity of press.

CHRISTENSEN PILE SUCTION STREAM FEEDER – For flat bed, rotary and offset presses and varnishing machines.

DEXTER CONTINUOUS RELOADING METAL SHEET FEEDER – Feeds sheets 38 to 24 gauge, in sizes 14 x 18" to 36 x 44" – at speeds up to 80 per minute. Provides press operation uninterrupted by stops for reloading.

GATHERING and INSERTING –

CHRISTENSEN STITCHER FEEDER – for inserting and stitching saddle-bound catalogs and periodicals.

MARTIN ROTARY GATHERER, STITCHER AND COVERER – For gathering signatures of books prior to other binding operations; and for gathering, side-stitching and covering magazines.

TRIMMING – BRACKET SAFETY TRIMMER – For label cutting, booklet trimming, singly or in multiple form – and cutting gang work.

FOLDING – CLEVELAND FOLDING MACHINES – For circulars, greeting cards, booklets singly or in gangs, catalogs, publications, etc. *Seven* models covering every bindery requirement and handling sheets from 3 x 4" to 42 x 62".

DEXTER JOBBING FOLDER, DOUBLE SIXTEEN and QUADRUPLE SIXTEEN FOLDERS – For job work and book folding in sheets from 12x16" to44x58".

VARNISHING – CHRISTENSEN VARNISHING MACHINE – For all types of varnishing jobs.

SORTING – DEXTER SORTING MACHINE – For paper mills. Speeds production and eliminates waste motion in coated paper and bond finishing rooms.

BRONZING – CHRISTENSEN HIGH SPEED BRONZER – For all types of sheet bronzing.

Dexter & Christensen Machines

All Dexter and Christensen Products are sold and serviced by

DEXTER FOLDER COMPANY, General Sales Offices

330 West 42nd Street, NEW YORK 18, N. Y.

DEXTER Machines *are built by Dexter Folder Company of Pearl River, N. Y.*

CHRISTENSEN Machines *are built by Christensen Machine Company at Racine, Wisc.*

PRESS BLANKETS SHOULD NOT BE *Mis-Mated* EITHER!

The important thing about cylinder packing is that the top blanket and the underpacking should be the right combination for your particular press and mechanical conditions. The finest top blanket won't do its best work without the proper foundation, and vice versa. Think in terms of matched *pairs.*

VULCAN offers the world's largest variety of *combinations* of top blankets and underpacking. This wide selection of types and gauges will give you the one combination that is best for your specific conditions and requirements.

You may be missing a big opportunity for improved presswork and economy if you are using cylinder packings that are not *properly mated.* Investigate the new, improved VULCAN Press Blankets, with their higher standards of uniformity of thickness, their "just right" degree of firmness—their improvement in surface texture, due to finer coating compounds. Order VULCANS for higher efficiency and longer life.

VULCAN

PROOFING COMPANY

FIRST AVENUE & 58th STREET • BROOKLYN 20, NEW YORK

Pacific Coast Representative:	*Canadian Representative:*
THE CALIFORNIA INK CO., Inc.	SEARS LIMITED, TORONTO

Proof Presses—*How to operate them to secure quality results — In view of demand for reproduction proofs, operator should be trained and equipment should be kept in proper condition — Use proper rollers, ink and paper*

By O. F. DUENSING*

**Sales Manager, Vandercook & Sons, Inc. Abstract of address delivered before ITCA convention, Book-Cadillac Hotel, Detroit, August 1947.*

PROOF presses, as we manufacture them today, are precision machines in the strictest sense of the word. They are ruggedly built for hard usage, and their design is no accident. Every feature and every operating part is adopted only after long study and research by a staff of engineers, with the result that a press can actually be guaranteed to produce a definite result under certain conditions. Getting top quality results in proving it neither difficult nor does it require more than ordinary skill if you have the right proof press—if you have a capable operator—if you are using the proper inks and papers—and if you are operating the proof press according to instructions.

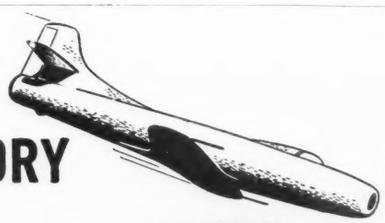
According to our Service Department records most of the service calls this past year were made for the purpose of adjusting a machine or correcting some difficulty which was causing unsatisfactory proofs, could have been avoided.

There are five reasons, our servicemen found, which caused whatever proving problems were involved. They are: (1) Inexperienced or indifferent operators, (2) Failure to keep the press clean, (3) Improper or lack of lubrication, (4) Carelessness, and (5) General neglect. Now, imagine what this means in money spent for unnecessary services and the precious hours of production wasted while the press was laid up for repairs. Imagine, also, the drop in quality of proofs resulting from this abuse of machinery.

There is a possibility you can improve the quality of your proofs without either changing your methods or buying new equipment. Let me illustrate what I mean. Most of you are familiar with the No. 4 Vandercook, so we'll use it for our illustration. On this machine, the engineers determined the cylinder should be undercut 0.040 in. in order to produce certain results in the finished proof. This means that the packing on a No. 4 must be from 0.042 in. to 0.043 in.—which includes the sheet to be printed—in order to obtain the best results. If you have too much packing, it may result in misregister, slurs or wrinkles, for it causes the cylinder to print longer than the form. Underpacking likewise results in slurring, as well as pulls the sheet out of the grippers, or packing from under the clamping bar.

Remember, the bearer height on the No. 4 is type high, or 0.918 in. Since both the bed and the cylinder are rigid and inflexible, only the correct amount of packing will give you the firm, yet resilient impressions necessary for clean, sharp proofs. Time and again, Vandercook servicemen report finding the press improperly packed, or the packing so badly embossed and in need of changing that good results are impossible.

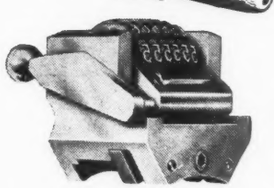
The same is true of the rollers. On the No. 4, they are of synthetic rubber, which do not change diameter with temperature and humidity as regular composition rollers, but do require occasional checking and adjustment. If they are not systematically checked to be sure they are properly set, you cannot be certain you



numbers that made HISTORY

650.6*

*World's airplane speed record of 650.6 m.p.h. set by Douglas Skystreak over Muroc Dry Lake, Calif.



numbers that make PROFITS

1234567
FACSIMILE IMPRESSION
WETTER ROTARY NUMBERING MACHINE

There are substantial, easily-made profits waiting for you in numbering work—especially if you use dependable Wetter machines. The rotary model shown is for use on rotary presses.

No matter what the numbering job may be, you'll find a Wetter machine that will do a smooth, trouble-free job.

Note these *exclusive* Wetter features and you'll see *why* "you can number better with a Wetter":

❶ Frame of one-piece solid steel. ❷ Oval-shaped plunger, supported on all sides, no wobble, no smear. ❸ Lowest plunger, only 7 points high. ❹ Drop-cipher strongest made. ❺ Wheel shaft has V-slot for easy oiling. ❻ Machines are even picas in length.

New orders must await cleaning up of old ones. Every effort is being made to speed production and to take care of *all* orders. While we eagerly look forward to the day when Wetter can re-establish its reputation for the prompt deliveries to which users were once accustomed, we must ask for your indulgence and patience a while longer.

WETTER NUMBERING MACHINE CO. Atlantic Avenue & Logan Street, Brooklyn 8, N. Y.
SOLD BY ALL DEALERS AND BRANCHES OF A. T. F., INC.

Our Neck is Out

every time you add

PLUS METAL

Every time Plus Metal is added to the working supply of type metal, Imperial's neck is sticking out, for Imperial assumes the responsibility for that metal's performance.

The Plus Plan is an accurate method for replacing vital elements removed in the dross. Imperial does this by furnishing a tailor-made alloy for each plant. These alloys, called Plus Metals, vary from plant to plant, and in some cases, from month to month, for the Plus Metal must conform to the needs of each plant as an individual. The Plus Plan prevents trouble and many production losses by anticipating and compensating for regular metal deficiencies. That is why Imperial can stick a neck out so freely. May we tell you more?

IMPERIAL TYPE METAL CO.

Serving the Graphic Arts Industry Only

Philadelphia 34 **New York 7** **Chicago 50**

Imperial

He doesn't have to use lock-up surface for storage space with

HAMILTON EQUIPMENT

★ Production slows down . . . expensive presses may be held up . . . whenever a lock-up man wastes his valuable time unpiling and re-piling forms or shoving around lock-up materials to make room to do his work. With a Hamilton Imposing Table a lock-up man doesn't have to struggle along with a cluttered-up imposing surface. Forms and lock-up materials are stored out of the way yet are in easy reach when needed.

Selection of the right design of imposing table is also important for full lock-up efficiency. The Hamilton line is so flexible and complete . . . provides such wide choice in size of imposing surface and in variety of units for form and material storage . . . you can have exactly the table you need whatever your requirements. Each Hamilton Imposing Table is individually assembled . . . to your own specifications . . . and at no extra cost.

Catalog No. 24, just off the press, illustrates 16 of the most popular Hamilton Imposing Table assemblies. It also shows the almost limitless variations that are possible through various combinations of standard imposing table assembly units. Ask your Hamilton Dealer or write us for your free copy of this new catalog.

HAMILTON

MANUFACTURING COMPANY

TWO RIVERS, WISCONSIN

are getting proper ink distribution, without which good proofs are impossible to obtain.

Then comes the subject of cleanliness, which Mr. Vandercook, jr., used to talk so much about. It is something which costs no money, requires no special skill to achieve, yet is one of the most common of all causes for poor proving results. Certainly, it should be easy to understand that, if the rails on which the cylinder travels are filled with grease and dirt, an uneven impression will result. Similarly, if the surface pores of the inking rollers are clogged with dried ink, a roller cannot function efficiently, nor can good proofs be obtained.

Our servicemen also found presses standing idle, or delivering faulty proofs because someone forgot to oil the machine, or keep it clean, got careless, or simply never took the time to learn about the press and its operation.

Of course, I imagine that about now some of you are saying, "That may be true of some plants, but not ours—we keep our machinery clean and our operators know what they're doing—and still we're not getting satisfactory results."

The more successful the plant (there are many successful small and medium size plants as well as large ones) and the more widely these plants become recognized as suppliers of quality typesetting, the more critical they seem to get of their own work. As a result of this observation I would like to give you, in the order of their importance, five basic rules which any plant should adopt before it can hope to obtain maximum results in fine proving.

First—Establish a quality standard for your plant. Once you have decided what it is to be, make it known to everyone in your plant, that nothing which does not come up to this standard will be acceptable.

Your first reaction might be "What has a standard to do with getting the most out of a proof press and pulling better proofs?" We believe it has a great deal to do with the results you get. Workmen in a plant soon know whether the boss expects the highest standard or will be satisfied with something less. If you want the best results, you must make up your mind about it in advance, and then see that every effort from then on will bring that kind of result. You can't produce the best quality proofs unless you want to—and unless you have the proper equipment, the right kind of paper, the right kind of ink, and instilling in your staff the idea that you would be satisfied with nothing less than the best.

Second—Having made up your mind as to what your standard of quality is to be, your next objective should be to get the right kind and right size of proof press. It would surprise you to know how frequently we go into plants where some proving job is being attempted that simply cannot be turned out on the equipment in the plants. I'm speaking of quality proofs, not galley or ordinary reading proofs which are rarely studied critically. In some plants, we find old equipment on which attempts are being made to pull reproduction proofs. It simply can't be done.

If you have a small, hand-operated proof press without grippers, you can't pull good reproduction proofs. Hand inking also is not desirable, unless the inking is expertly done.

Third—Either hire an operator who has the necessary skill and experience to obtain the maximum quality from a proof press, or encourage some young fellow to take the proof press seriously and train himself into an expert. This suggestion is one which deserves serious consideration, judging from the numerous complaints we hear throughout the industry that trained men are difficult or impossible to find. Maybe a training school will have to be established in order to provide yourselves with the necessary men. Maybe you will have to elevate the job of the proof press operator. In the photo-engraving field, a prover considers himself quite the equal, in skill as well as in earning capacity, as his fellow craftsmen in the trade.

Fourth—Watch your equipment and make someone responsible to see that it is kept cleaned and properly maintained in general. This point is so important, I doubt if I can stress it enough. For, unless your equipment is kept in excellent operating condition, you won't get good results even if you have the finest proof press and the most skilled operator.

Fifth—I refer to rollers, as well as to inks and papers. Too often these three

TODAY

AS FOR 97 YEARS

EDES LEADS

You can't beat Edes when it comes to Photo-Engraving Metals — but you *can* beat the drums for them, as so many others are doing in shops all across the land. Make a note: For ALL Engraving Metal Needs — *Standardize on Edes!*

THE EDES MANUFACTURING COMPANY

PLYMOUTH, MASSACHUSETTS

DIRECTOMATS

Installed by more and more Leading Dailies

There are good reasons why more and more leading dailies are turning to direct pressure matrix molding and why they have chosen the DIRECTOMAT almost exclusively.

- ★ **DIRECTOMAT molding produces sharper, more faithful mats... makes possible the higher quality reproduction being demanded by advertisers and agencies.**
- ★ **The DIRECTOMAT eliminates stretch of mats...reduces chance of mat buckle... can produce dry mats with the same shrinkage you now get.**
- ★ **The DIRECTOMAT equipped for double-sided operation has the capacity of two mat rollers... requires the space of only one.**
- ★ **With the DIRECTOMAT all color work and fine half-tone work can be molded and completely dried... without shrinkage... in a single operation.**

Nearly 150 DIRECTOMATS are already bringing these and other advantages to leading newspaper and commercial plants throughout the United States and Canada. If you are interested in improving reproduction today... providing for R. O. P. color work tomorrow...write to Lake Erie for complete facts on the DIRECTOMAT.

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ENGINEERING CORP.
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LAKE ERIE ENGINEERING CORP.
568 Woodward Avenue, Buffalo 17, New York
Offices in Principal Cities and Foreign Countries

● Leading manufacturer of hydraulic presses—all sizes and types—stereotyping...plastic molding...processing ...rubber vulcanizing...metal working...forging...metal extrusion...special purpose.

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again....

AVAILABLE!

CHALLENGE

SEMI-STEEL

IMPOSING SURFACES

PRECISION GROUND

Is that GOOD NEWS!

Yes, we are back into production of Challenge composing room equipment. Right now is the time to replace those old-fashioned imposing stones with these precision ground, rigid, true working surfaces of semi-steel. They will speed up work and reduce lock-up time.

Challenge Semi-Steel Imposing Surfaces are two inches thick with heavy reinforcing ribs at right angles to prevent sag. The tops are precision ground to a high degree of accuracy and will maintain that accuracy when properly supported. Furnished with or without rabbet for standard galleys.

Built in 18 standard sizes all precision ground . . . except the 28x120-inch and 28 x 144-inch sizes which are planer finish. Special sizes on order

OTHER CHALLENGE COMPOSING ROOM EQUIPMENT

Steel Galleys—Galley Cabinets—Plate-Mounting Equipment—Stereo Bases—Hi-Speed Quoins—Labor-Saving Iron Furniture — Mammoth Iron Furniture and Proof Presses. Write for data today!

550-C

Challenge

THE CHALLENGE MACHINERY COMPANY
GRAND HAVEN, MICHIGAN

are regarded as accessories rather than vital parts of a proof press. If, as so frequently happens, the wrong types of ink, paper and rollers are chosen or used improperly, top quality proofs simply cannot be obtained.

Time and again, we get calls from plants having trouble getting good reproduction proofs. Our serviceman soon discovers they are attempting to make their reproduction proofs with ordinary composing room ink. In other cases, we contact shops trying to get reproduction proofs on regular proofing stock (usually an ordinary grade enamel) instead of some fine quality semi-gloss or dull coated paper, which most plants have discovered as being more satisfactory.

There will probably always be a division of opinion as to which type of rollers are best for certain purposes and conditions. Our own experience has been favorable to synthetic rubber. From the reports we receive, they are also preferred by most proving departments. The reason for this is that rollers of synthetic rubber are more durable—retain their shape and size longer than other types. And this is an advantage, since it also reduces the necessity of resetting rollers so often. On the other hand, some shops have a preference for composition rollers, which they claim are best for laying ink, though most users find them too temperamental and reactionary to temperature and humidity changes.

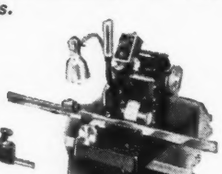
FOR TOP ACCURACY... Specify ROUSE TIME-SAVING EQUIPMENT FOR PRINTERS

Precision-made Rouse Tools will contribute to extra profits by helping you to maintain high quality output for your entire plant. It pays to order Rouse Tools for replacements.

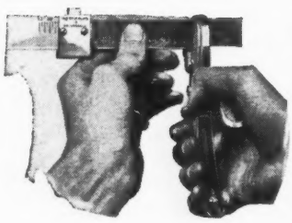
Write today for illustrated catalog of Rouse Equipment and Hand Tools.

No. 2 Band Saw

No. 40 Lead and Rule Cutter



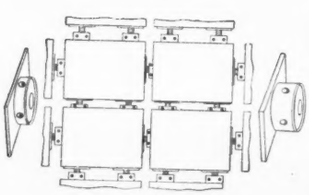
Economy Vertical Miterer



Slug Clippers

Sennett Positive Assembler

Hand Miterer

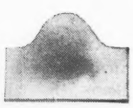


Register Quoins

Newspaper Wall File

Composing Stick

Line Gauge



Make-Up Rule

H. B. ROUSE AND COMPANY
2214 N. Wayne Avenue, Chicago 14, Illinois

Takes Up Duties

C. M. Flint, Research Director of the ANPA Mechanical Committee

C. M. Flint has been appointed Research Director of the American Newspaper Publishers' Association Mechanical Committee. Mr. Flint graduated from the University of Maine with a degree in electrical engineering. After graduation he joined the General Electric Co. During the war he was loaned to the Office of Scientific Development and Research where he interpreted results of research into practical manufacturing for the military. For the present the ANPA mechanical research program will not include trouble-shooting or the making of formulations. Mr. Flint will confer with Mechanical Committee members on mutual problems. It is stated he will visit newspaper plants, will disseminate literature on technical information, and study the training and recruiting of technical manpower. The research program is under the direction of a subcommittee known as the ANPA Committee on Mechanical Research. William Baumrucker, jr., administrative assistant, New York *News*, heads up this subcommittee. Serving with him are Ralph Cranmer, Business Manager, Williamsport (Pa.) *Grit*; Rudolph Lent, Business Manager, Jersey City (N.J.) *Jersey Journal*; John J. Shea, Hearst Newspapers, New York, and Charles H. Ruth, Production Manager, Washington (D.C.) *Star*. Flint's present address is care of American Newspaper Publishers Association, 370 Lexington Ave., New York 17, N. Y.

EXECUTIVE ¶s

Dr. Webster N. Jones, Director of the College of Engineering and Science of Carnegie Institute of Technology announced recently that Adelbert B.

NO
"SCREAMER"
NEEDED

Johnson Inks are high quality inks.

But what's startling about that? They've been known as such for 143 years, so we don't think there's any call for an exclamation point.

CHARLES ENEU Johnson AND COMPANY
GOOD INKS SINCE 1804
10th and Lombard Streets, Philadelphia, Pa.

NEW YORK · CHICAGO · BOSTON · ST. LOUIS · CLEVELAND · DETROIT · BALTIMORE · KANSAS CITY · PITTSBURGH · ATLANTA · DALLAS

Brokaw was named instructor in typography. He received his degree in printing from Carnegie and holds a journeyman's card in the International Typographical Union.

The Linotype Co. announces the appointment of Wesley E. Carter to succeed the late John E. Allen as editor of *The Linotype News*. Mr. Carter has a background of newspaper work and commercial printing. A graduate in journalism from the University of Kentucky,

Wesley E. Carter is appointed editor of *The Linotype News*

where he was also employed as Linotype operator, he later attended Columbia University. He was connected with various Kentucky papers, and during his ownership of one of them, his paper won several awards for typographic excellence. He is the second editor of *The Linotype News* during its 25 years of publication existence.

Earl C. Shaeffer until recently with the Zanesville (O.) *News*, has joined the Zanesville Publishing Co. as composing

Earl C. Shaeffer, composing room superintendent of the Zanesville Publishing Co.

room superintendent. The company publishes the *Times-Recorder*, The Zanesville (O.) *Signal* and the Sunday *Times-Signal*. Mr. Shaeffer has made a special study of the composing room organization, arrangement, lighting, heating, ventilation and production methods.

George S. Dively, vice president and general manager of the Harris-Seybold Co. since 1944, has been elected president and general manager of the firm, according to an announcement by R. V. Mitchell, board chairman and chief executive officer. He was chosen by the

George S. Dively is elected president and general manager of Harris-Seybold Co.

board of directors to succeed the late Alfred Stull Harris. Dively has been associated with the company for more than ten years, serving as secretary-treasurer prior to 1944. He has been a member of the board of directors since 1941, it was reported. Dively is a graduate of the Engineering School of the University of Pittsburgh and of the Harvard Graduate School of Business Administration. He was recently elected a vice president of the American Management Association.

Joseph H. Horton, of Capper Publications in Topeka, Kan., has assumed the

duties of production manager in addition to those of press superintendent, it was announced recently. Leland H. Schenck, former production manager, has been appointed secretary and director of manufacturing.

Frederick E. Cover has joined Intertype Corporation sales organization as representative in Colorado, Wyoming and South Dakota. Mr. Cover learned the trade as an apprentice in New Hampton, Mo. After graduating from University of Kansas he operated his own newspaper at Johnson, Kan., for a time. Later he joined the News Corp. of St. Joseph, Mo., as an operator. He served in the Navy for three years.

Frederick E. Cover becomes Intertype representative in Colorado, Wyoming and South Dakota.

The Champlain Corp. has appointed Albert T. Kuehn, machine designer, head of its Chicago District office. Mr. Kuehn has a background of 18 years in the Graphic Arts field. He worked with Adolph Weiss in the redesign of the Weiss gravure enclosed ink fountain and also designed equipment for producing fibre milk containers. His headquarters are at 7 S. Dearborn St., Chicago, Ill.

Albert T. Kuehn heads Chicago district for Champlain Corp.

Edward M. Krech has joined the J. M. Huber Corp. as director of purchases, H. W. Huber, president, announced. He will coordinate all purchases for the ink, industrial products, clay, and oil and gas divisions. He will make his headquarters in Brooklyn. Prior to joining Huber, Mr. Krech was in the sales and purchasing departments of the Singer Mfg. Co.

Edward M. Krech, director of purchases for the J. M. Huber Corp.

Constructive Program

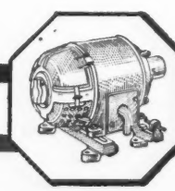
(Continued from Page 50)

condition about the same and 51 find less of it. Competition in general increased in 522 companies, was about the same in 515, and declined in 46. Similarly, price competition was found to be greater by 570 companies; about the same by 460, and less by 46.

These figures should all be considered in the background that 420 expect an

KIMBLE

CUSTOM-BUILT MOTORS



STANDARD OF PERFECTION IN THE GRAPHIC ARTS INDUSTRY FOR NEARLY A HALF CENTURY

KIMBLE ELECTRIC

Division of Miehle Printing Press & Mfg. Co.

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DISTRIBUTED BY AMERICAN TYPE FOUNDERS

Speed Up Your Work!
Save Money and Time-
with

SYNTRON

"VIBRATING"

PAPER JOGGERS

Their 3600 vibrations per minute jog paper 3 to 4 times as fast as by hand, without pounding.

3 types—single action, double action, and automatic.

7 styles—two table models, five portable floor models.

Write for Descriptive Folder

SYNTRON CO.
577 Lexington
Homer City, Pa.

2 COMPOSING ROOM NECESSITIES

Hundreds of plants now using

BOOTH'S ZINK CUT CEMENT

and Booth's Black Rubber Rolls claim them to be composing room necessities. They should be in your plant. Booth's Zink Cut Cement mounts cuts quicker, saves time, and eliminates risks of out-of-position cuts. Booth's Zink Cut Cement is reliable, sets quickly, holds fast. You will like the handy tube dispenser for the fastest cut mounting method known. Rely on Booth's Zink Cut Cement.

PRICES: In the United States:
75c per tube, $6.00 a dozen tubes.
$5.00 a dozen in gross lots.

BOOTH'S BLACK RUBBER ROLLS

smooth, sweet running, highly responsive, provide maximum cam tread friction, favorites with line casting machine operators everywhere. Get a supply now and you will soon find out why they are so popular.

PRICES: $1.45 per pair
$7.75 per dozen

E. A. Booth Rubber Co.

MAHONING BANK BUILDING
YOUNGSTOWN, OHIO

HIGH TEMPERATURE

METAL TESTING

DIAL THERMOMETER

THE same easy-reading all metal thermometer so enthusiastically received before, but with higher range, 200 to 1000° F. This increased range offers a greater margin of safety to Linotype and Intertype users against accidental overheating.

NOW it can be used on ALL metal pots in the plant,—Monotype, Stereotype, etc.

- Easy Reading—face up
- Quick Acting
- Accurate

Saves your neck and your time!

With an ACE BELT it 'ain't' the heat or the humidity.

PRECISION
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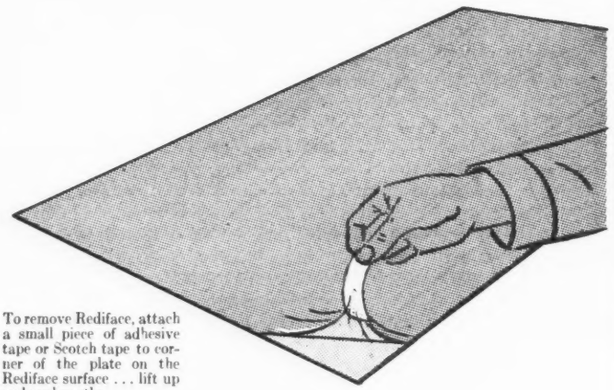
ANOTHER
Imperial Development



To remove Rediface, attach a small piece of adhesive tape or Scotch tape to corner of the plate on the Rediface surface . . . lift up and peel gently.

REDIFACE
PLATE PROTECTION
at no Extra Cost

Imperial brings you another new development—all Imperial Redibak Zinc now has its surface protected by a new skin coating. This coating—Rediface—adheres to the surface of the zinc, sealing it against grease, dirt, and moisture. It is infinitely better than loose wrapping paper used in the past.

When ready to use Imperial Redibak Zinc, with its Rediface coating, the engraver cuts the plates to size. He then attaches a small piece of Scotch or adhesive tape to one corner of the Rediface surface. By lifting up the tape, the Rediface is easily peeled from the surface, preparing it for the enamel.

Rediface protection is yours without cost on all Redibak Zinc. Full sheets and left-over pieces of the zinc can be stored for future use, fully protected by Rediface. In ordering zinc, be sure you get Imperial Redibak Zinc with the new protective Rediface.

IMPERIAL TYPE METAL CO.

Serving the Graphic Arts Industry Only

Philadelphia 34 **New York 7** **Chicago 50**

Imperial ZINC

BEVERIDGE
will soon meet
Increased Demand

Beveridge Dry Mats

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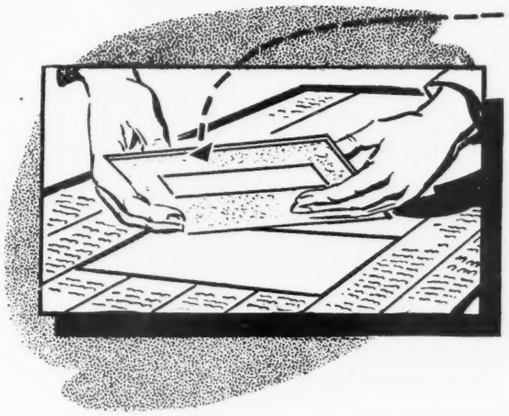

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Again in full production, PLATE-TAK offers printers, stereotypers and electrotypers a faster, cleaner, more convenient method for mounting or positioning all types of cuts on either wood or metal base. Its characteristics make PLATE-TAK equally suitable for use on the proof-press, layout table and for preparing forms for the Stereotype Department.

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increase in their business during the next 12 months, whereas 468 expect it to be about the same, and 130 expect a decline.

Industry Problems

Manpower and paper are the two major problems confronting the printing industry according to the comments of more than 1000 printers. The particular item which seems to be causing the most difficulty is the obtaining of skilled labor, 90 members mentioning this matter.

As to paper, 67 found difficulty in obtaining it as their major problem, and others complained of high paper costs. There were several complaints as to other material shortages and the high cost thereof. New equipment was also a matter of top concern to several companies. There were a great variety of other items such as taxes, customer demands, rough work, unsettled conditions, selling promotion, high overhead, competition, good salesmen, lack of floor space, high rent, financing, and production costs.

Cost Finding

Replies to several questions in the PIA survey indicate a serious concern with cost finding. A substantial proportion of those replying do maintain a cost system: 692 answered in the affirmative, whereas 281 say they have no cost system. However, 140 plan to install a cost system. Asked whether, in their opinion, their competitors knew their own costs, it is interesting to report that 683 felt that their competitors did not, whereas 309 do credit their competitors with this knowledge.

Research Off To a Good Start

Public Printer A. E. Giegengack and Frank F. Pfeiffer, Reynolds & Reynolds Co., Dayton, O., and Chairman of PIA Research Committee, joined Monday afternoon in unveiling the new PIA Research and Operations Manual. The Public Printer displayed the Manual before the audience as a symbol which culminates his years of effort to assist the industry in developing a practical, everyday research plan.

"Our proposed program has now passed the talking stage" Mr. Giegengack said. "I know Mr. Pfeiffer and every member of his Committee are serious about this project. The GPO is equally serious about its share. We are willing to report everything we have done, everything that we are doing and everything we propose to do. I think the theme is not far off when we can all point to today as an eventful one in our printing industry and a milestone in its long and shining history."

Mr. Pfeiffer reported that the first six items in the Manual are: *Detergents for Printers*; *Book Binding Paste*; *Bindery Glues*; *Miscellaneous Book Binding Adhesives*; *Type Metals*, and *Process of Marbelizing Paper*. He said that some twenty additional monographs are now being reviewed by his committee.

He pointed out that the beautiful binder, enclosing these first six inserts, is labelled Volume 1. "I do not know how many volumes we will eventually have," he said, "but there probably will be several. We have a definite opportunity here to create an encyclopedia on the technical operations of a printing company. As more and more material is inserted in the manual, we hope to provide dividers and indexes so that any technical problem arising might be partially answered at least out of this manual.

"In the first instance, the manual will be distributed to the charter subscribers to PIA's Education Program. You will recall that this program calls for nine textbooks, manuals, or training courses, for the total price of $200. Included in this is the *Research and Operations Manual* which goes to these subscribers with a guarantee of service for two years. Thus, charter subscribers will be receiving $20 of their investment in this manual. I understand that the *Cost Manual* which was released this morning will be leased at an annual rate of $15 a year, and that charter subscribers receive this also as part of their subscription. In the two books alone, charter subscribers will receive a value of $50.

"I do hope sincerely that each of you will take the time to write me a letter suggesting material which should be developed for the manual. Obviously, we cannot do it all at once, but it will be so much better if we do have a great quantity of suggestions."

(*Continued on Next Page*)

Senator Approves Research

On Thursday, September 24, Senator Jenner of Indiana, approved a plan for an active cooperative research endeavor between the Government and the commercial printing industry. Senator Jenner, who is Chairman of the Joint Committee of Printing of the House and Senate, said that numerous mutual benefits should flow from activity now in progress toward releasing the results of important Government Printing Office research in many fields.

The Senator said that shortly after the organization of the committee, as called for by the Congressional Reorganization Act of 1946, he and his committee worked out a definite program. He said: "First is the Government-industry technical research program, carried out through the cooperation of commercial printers and the Government Printing Office. This is the first instance of specific and formally-authorized collaboration in the printing research field and we expect it to provide numerous mutual benefits.

"Based on the facts revealed by this survey, with which all of you are no doubt familiar, the Joint Committee on Printing has authorized a physical inspection trip covering the 30 areas of greatest concentration in the country. This inspection is now going on and is scheduled to be completed in six months.

"Its primary purpose is to obtain data by which it can be determined where plant consolidations, reductions in size or outright eliminations can be effected.

"The third development, which grew out of the survey, is the recognition of technical printing advances by characterizing duplicating and offset printing as actually being printing. Without this recognition, only confusion could result from any attempt to carry out a logical, straightforward program. It also would make enforcement of the printing laws difficult.

"Compliance with these laws, however, will be more securely established when the fourth development is concluded, namely, revision and recodification of the various rules, regulations and laws. The study to accomplish this already has been started.

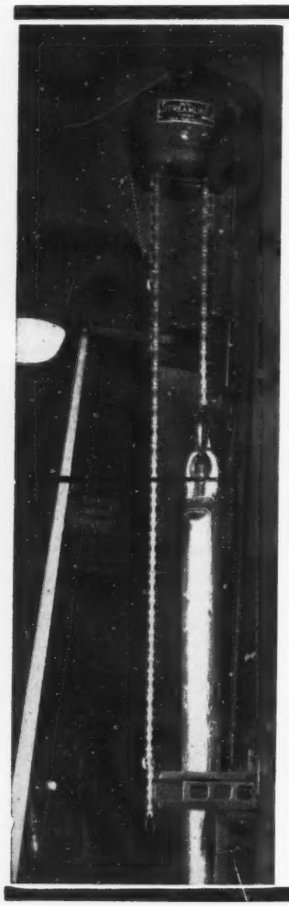
"Last, but certainly not least, is the support by the Joint Committee on Printing of a policy by which Government printing activities will be based on practical, reasonable necessity.

"The policy requires constant investigation of the many continuing activities and new proposals as they arise. An example of its value was demonstrated during the last session of Congress when examination of a request to include $14,000 worth of illustrations in a publication printing job resulted in the reduction of the illustration costs to approximately $1600 and the overall job cost from $50,000 to $15,560, little more than the original illustration costs."

Labor Sessions

Two sessions of the PIA convention were devoted to the Union and the Master Printers' Sections of the membership. On Tuesday morning and afternoon, the two sessions ran concurrently. Prominent in both meetings were discussions relative to the Taft-Hartley law enacted recently. Thomas Shroyer, general counsel of the Joint Committee of Congress to study operation of the law, predicted that the International Typographical Union "will be unsuccessful in its device to escape responsibility under the new law." A. J. DeAndrade, Vice President of the International Printing Pressmen and Assistants' Union of North America, urged that labor negotiations should be an appeal to reason, and that a dictated settlement in which one side forces terms upon the other means the negotiations were not a success. "Negotiation cannot win the respect and support of the community if it is merely a method of fixing terms of employment on the basis of power on the part of either party."

In speaking before the Master Printers Section of PIA, Secretary Walter S. Hall stressed that employers should look upon personnel relations as a technique for management as definite and as important as any element of business management such as cost accounting. "Personnel relations is not something which springs from an employer's ideals," Mr. Hall said. "It will be a better program if part of its foundation is based on an enlightened idea of the employer's responsibility for his men, but the most important foundation is that it should be recognized as a sound business plan for increasing profits."



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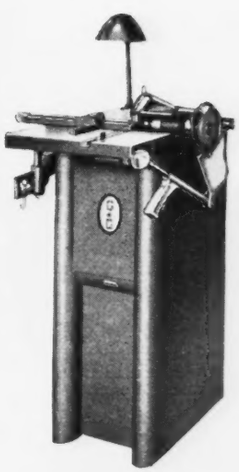

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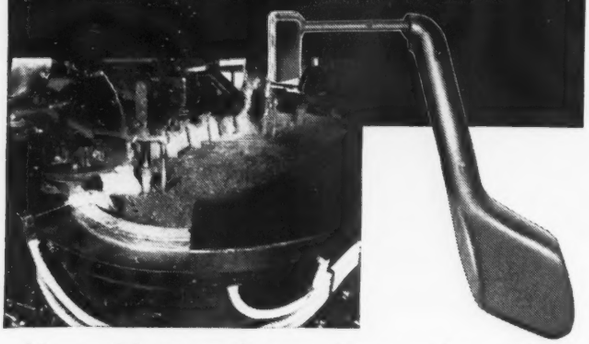

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Glycerine In Printers' Rollers

(Continued from Page 33)

The term "hardening compounds" while referred to as such, is used to indicate that the general effect of hardening compounds tends more to change the general structure of the glue so that it does not melt and in addition it becomes more and more soluble. Actually, the glue never becomes totally insoluble and always absorbs some moisture even though enough chemical is added to render the glue non-meltable even up to the charring point.

As noted by Hoch,[18] the increased speed of modern presses has promoted the development of the non-melt roller to withstand surface friction and heat; conditions under which the ordinary composition roller would melt. However, the non-meltable ingredients tend to affect the printing qualities of the roller. Hence, in making these rollers, manufacturers strive to retain as much of the printing qualities as possible along with the maximum of non-meltability.

Although some manufacturers make non-melt rollers of the same hardness throughout the year,[4] they insist[5] that it is incorrect to call them "all-season" or "everlasting" rollers. It is pointed out that they are made to meet speed or condition requirements and that the same chemical which makes them non-meltable, if used in excess, will break down the glue and thus shorten the roller's life.

The roller manufacturer's objective, of course, is to make a roller with correct ink distributing qualities. Some manufacturers vary the proportion of glue and glycerine from season to season whether they are making the regular meltable compound or the non-meltable compound. A winter roller in the winter time will feel just about as hard or soft as a summer roller will feel in the summer time.

The use of non-melt rollers appears to be increasing, particularly where regular composition quality is desired on speed presses. Satisfactory results have been obtained.[18]

Coated rollers, which may be classed as a third modification of the composition roller, are finding wide use and are being constantly improved.[19] These rollers are made of a soft, durable rubber base with a thin coating of composition. According to Trotter,[5] there are two reasons for the composition coating. The first is to obtain glue-glycerine printing quality. The second reason hinges on the fact that the base material will not itself withstand the action of linseed ink for very long. Of interest in this connection is the preferred use of glue-glycerine coated rollers in a standardized test for printability. The glue-glycerine coated rollers were selected because of their superior accuracy.[20]

Cost is another factor in the growing use of coated rollers. A coated roller with a rubber base is initially more expensive, but recoating costs, it is claimed, reduce expenses in the long run. Such rollers find growing use on all types of letterpress equipment. Many large organizations are doing their own coating and suitably equipped plants are said[9] to use coated rollers almost exclusively.

Although glycerine finds its most important applications in connection with

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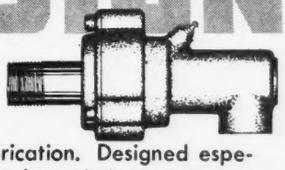

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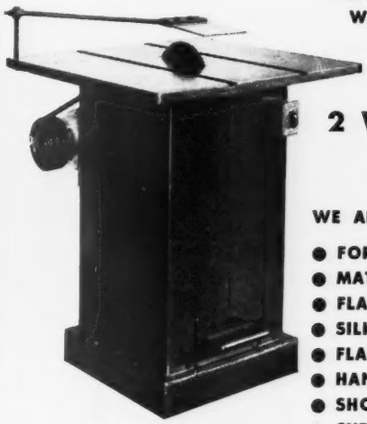

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glue or gelatin in the production of composition rollers, it is also employed for its beneficial action on other roller-making materials. It is useful, for example, when casein glue solutions are used to make flexible printing rollers. One such composition is described as containing casein glue solution, glycerine, molasses, and a preservative.[16] Foreign studies [21] with other raw materials have resulted in formulas for interestingly different printers' rollers. One such, which yields rollers that fulfill typographical requirements, is based on a mixture of glycerine, starch and magnesium chloride, plus additions like ammonium chromate, potassium permanganate or manganese dioxide. Occasionally, glycerine's plasticizing and other properties are used with advantage in conjunction with rubber or rubber-like materials for making printers' rollers.[22,23]

Synthetic rollers, made from newer materials developed in the research laboratories, offer tremendous possibilities in the pressroom. Among these materials are the alkyd type resins, particularly those known as Glyptal resins.[24] Glycerine enters this part of the picture because it is one of the materials required for the chemical production of these alkyd resins.

These resins, like glycerine itself, are highly adaptable materials. A number of patents[25, 26, 27] indicate that certain of

(*Continued on Next Page*)

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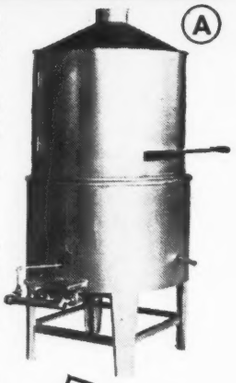

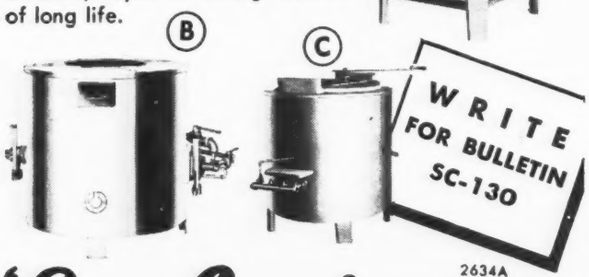

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these resins are well suited to making printers rollers and related products. Suitably modified glyceryl phthalate resins are most frequently used, but other alkyds like glycerine-adipic reaction products, are also suitable. It is said [28] that printers' rollers made with flexible glyceryl phthalate alkyd resins will maintain a constant degree of softness and not lose shape during a year or more of constant use. Through research it has become possible to make alkyd resins that will meet a variety of roller requirements. Rollers of the synthetic alkyd resin type are oil-resistant and therefore do not swell with printing inks. Furthermore, they do not melt or become excessively soft during the heat of long summer runs.

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Imposing Building

(Continued from Page 35)

Also on the first floor is the finished stock room and shipping department.

Executive offices and general offices are on the second floor. Here also are the art, camera and platemaking departments. The latter department has the largest original plate-making capacity in the middle west.

The building, which is generally windowless with exception of a few windows for matching colors in daylight, is air-conditioned for year-around printing efficiency and personnel comfort. Two 225 T. Carrier air-conditioning units are located in the tower. The air is filtered by electronics and oil. An automatic control holds the humidity within 1 per cent up or down of the desired humidity. In winter the plant is heated by Todd Forced Draft Rotary Oil Burners with steam radiation used at the thermopane windows.

Although the building is fire-proof, an overhead sprinkling system adds further protection against fires on all floors including the basement. One of the outstanding features in designing the building is noticed at the center of each floor. Washrooms, lockers, ventilating system and power outlets are located here for easy access. There are two freight and three passenger elevators, all automatic. Lighting is mainly indirect and fluorescent.

First impressions of the interior are formal. Large bronze and glass doors lead into the first floor lobby of Italian marble. However, a more informal atmosphere is encountered on the second floor. Here, a reception room combines pleasant colors, spaciousness and living plants to make it attractive and comfortable.

Executive offices are reached through a long corridor with cross beams overhead which serve a two-fold purpose in addition to their structural duty. These beams conceal indirect lighting and create the impression of width. At one

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CASH WITH ORDER

Count approximately 25 characters per line.

CLOSING DATE—15th of Month preceeding Date of Issue. We will forward all mail addressed to Box Numbers. When answering Box Numbered ads, address as follows: Box Number . . . PRINTING EQUIPMENT *Engineer*, 1276 West 3rd Street, Cleveland 13, Ohio.

FOR SALE

40 Hoe Chases suitable for either hand box or pony. $50 each. Press $22\frac{3}{4}$" cut off. R. S. Stratton, St. Petersburg Times, Fla.

FOR SALE BY OWNER

No. 2 Kelly Press, automatic fed, extension delivery, all needed parts renewed a year ago, in excellent running condition, AC Electrical equipped, press has not been abused. A bargain at $6000.00.

P. O. Box 1125,
Oklahoma City, Oklahoma

LINOTYPE and INTERTYPE USERS • • •

A Dixie Stevenson Furniture mold on your machine will give you an unlimited supply of furniture, base and spacing material.

Manufactured and sold by

• • • **DIXIE TYPE and SUPPLY COMPANY**
1712 Warrior Road **Birmingham, Ala.**

RICHARDS *Since 1900*

KALAMAZOO, 13F

Saw-Trimmers, Flat and Curved Plate Routers, Stereotype Saws and Mortisers, Steel Rule Dies.

The most complete line built. See our page ad July issue or ask for catalog.

BAUM FOLDERS

RUSSELL ERNEST BAUM

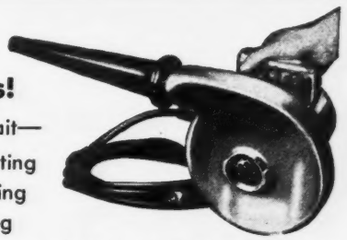
615 Chestnut Street **Philadelphia, Pennsylvania**

USE **Mercury Rollers and Blankets**

Built For **SUPERIOR PERFORMANCE**

RAPID ROLLER COMPANY
Federal at 26th Street **Chicago, Illinois**

Delay is Dangerous!



While you wait—

Dust is accumulating
Friction is wearing
Heat is increasing

Blow out dust, dirt, lint and oily fuzz with the Tornado Portable Electric Blower. Keep motors, shafting, machinery clean—cool—smooth-running—with a tremendous blast of clear, dry, concentrated air.

Write today for literature or free demonstration

Learn how you can reduce maintenance and repair costs, and keep your equipment operating smoothly at full capacity. Write

BREUER ELECTRIC MFG. CO.
5114 Ravenswood Avenue, Chicago 40, Ill.

For Fast . . . Safe . . . Accurate

SAW-TRIMMING

Choose the

NOLAN *"Chief"*

Speedy operation and accurate results are assured when you use this ruggedly designed saw-trimmer. You save time and money. Investigate the advantage of the Nolan "Chief" Saw-Trimmer today.

NOLAN CORPORATION
1331 East Dominick St.
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Manufacturers of Finest Quality Printing Equipment

100% AUTOMATIC SLUG SAWING

Odd measure slugs sawed to any measure as ejected from line-casting machine. Fast-accurate-economical.

MOHR LINO-SAW CO.
128 N. Union St. **Chicago**

MOHR SAW

LETTER PRESS • OFFSET
ROTOGRAVURE • WEB DRYING

B. OFFEN & CO.
343 So. Dearborn St. Chicago 4, Illinois
"AIR CONDITIONING AND HUMIDITY CONTROL"

★ STAR CUT CEMENT ★

Since 1936 — *For Mounting* — Since 1936

CUTS...STEREOTYPES...ELECTROTYPES

65c per tube-$5.25 per doz. $5.00 per doz. in two doz. lots, $4.00 per doz. in gross lots.

★ STAR CEMENT COMPANY
45 Malone Avenue, BELLEVILLE 9, N. J. ★

SYNTHOX ROLLERS *Ideal*

Best in the long run—proved in service!

Synthox rollers distribute moisture-set and linseed base inks smoothly and efficiently; special formulas for special purposes. Popular on large rotaries as well as on smaller, high-speed presses. Easily used and easily cleaned.

IDEAL ROLLER & MANUFACTURING CO. Chicago 8, Illinois
Long Island City 1, N. Y.

EXHAUST SYSTEM

(Continued from Page 24)

tobacco plants. The device achieves 95 per cent of perfection."

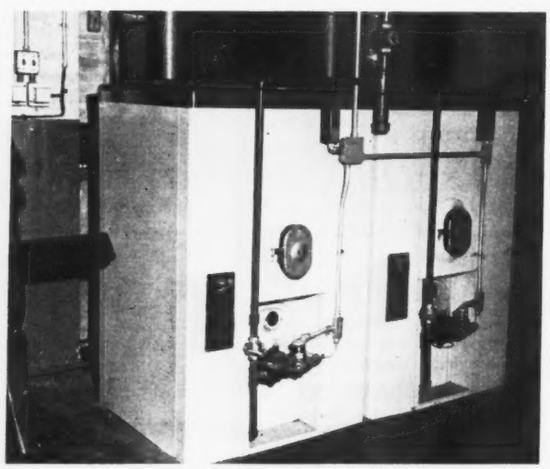
Melhado, who schemed Tuggy's wedding of spray and water, with the characteristic deliberation of the engineer, diagrammed for the writer the action of the new system, for which patents are pending. Melhado quietly described the technical involvements—but not for publication. He pointed out:

"The system is of the utmost simplicity and it is as nearly foolproof as anything can be. The spray-dust removal sprinkler system is connected with the normal plant water supply and requires no special pumps or complex installations. The entire system, including the ventilating and humidifying apparatus, is automatically controlled. Installation time is six to eight weeks."

In a demonstration of the effectiveness of the system given for the writer, the apparatus was shut down while all presses were rolling. In 15 min. the atmosphere of the plant turned from clear to foggy, the room became hot and sticky, and the odor of the wet spray became distinct. In another 15 min. conditions grew even worse. The system was then thrown back into operation, and in 5 min. by my watch the pressroom was restored to its original status—atmosphere clear, temperature comfortable, and no odor.

The writer visited plants other than Woodrow to gain an appreciation of conditions created by spray dust. One pressroom with 14 presses had been occupied for four months. But "snow" coated every stationary object in the plant, looking like a dandruff storeroom for the nation's barber shops.

My tour of pressrooms comparable to the Woodrow plant stalled any questions about Tuggy's estimate that production in his own plant is 8 per cent better than it was before creation of the new system—the wedding that matured in pencil shavings and cigar stubs.



In the plant of New York's Woodrow Press, this Lennox gas-fired furnace during winter months boosts the temperature of the incoming filtered air to the desired level of plant temperature. Furnace is capable of raising air temperature instantly by 60 deg. F. for distribution throughout the room, and it is automatically controlled. Hood shown at the center-rear of the furnace covers the air-filter apparatus.

end of the corridor is a library finished in padded tan leather walls and furnishing. The green and brown color combination is complemented by a large illuminated mural on one end of the room.

Each executive's office is finished in walnut or mahogany and furnished to fit the occupant's taste. Adjacent to these offices are baths and stall showers.

N-R's Genesis

In February, 1922, Charles H. Newman and Rudolph H. Mathesius started in the lithographing business with an initial capital of $12,000. Every year since, the company has made a profit which was turned back into the business.

In a sense of the word, Newman-Rudolph is a pioneer in the field of lithography. Its management always has been prompt to install new machinery and equipment to increase the quality of product.

When Newman-Rudolph first started in the lithographing business in 1922, there was only one single-color press. Today, single, two-color and four-color presses are operated, producing from 250 to 300 million single-color impressions a year.

The plate-making department is equipped with modern cameras, special built-in dark rooms, and is said to be manned by the largest personnel in the middle west. Hundreds of sets of color plates are produced each year.

Newman-Rudolph rates high among the lithographers of the country from the standpoint of capacity, modern facilities and the "know how" in the handling of the one thing it does—offset printing.

Printing Executives are invited by the editor to submit descriptions of devices or methods which have been devised in their plants. These will help others.

BUYERS' GUIDE FOR OCTOBER 1947

American Gas Association 2
American Type Founders, Inc. 14, 15-19
Atlantic Zinc Works 55
Baum, Russell Ernest 75
Beveridge Paper Co. 68
Bingham's, Sam'l, Son Mfg. Co. 4
Booth, E. A., Rubber Co. 67
Breuer Electric Mfg. Co. 75
Burgess Cellulose Co. 58
Certified Dry Mat Corp. 74
Challenge, The, Machinery Co. 63
Cline Electric Mfg. Co. 73
Cottrell, C. B., & Sons Co. 43
Cromwell Paper Co. 71
Dayton Rubber Co. 10
Dexter Folder Co. 59
Deublin Co. 73
Dixie Type & Supply Co. 75
Eastern Newspaper Supply 69
Edes Mfg. Co. 62
Federated Metals Div.
American Smelting & Refining Co. 47
Flint, Howard, Ink Co. ..... Inside Back Cover
General Electric Co. 18-72
Goss Printing Press Co. 20
Hamilton Mfg. Co. 61
Hammond Machinery Builders, Inc. 21
Harris-Seybold Co. ..... Inside Front Cover
Hendy, Joshua, Corp. 8
Herrick, Wm. C., Ink Co. 73
Hoe, R., & Co. 53
Ideal Roller & Mfg. Co. 75
Imperial Type Metal Co. 61-68
International Printing Ink Co.
Div. of Interchemical Corp. 17
Intertype Corp. ..... Outside Back Cover
Johnson, Charles Eneu 65
Kemp, The, C. M., Co. 12
Kimble Electric Co. 66
Lake Erie Engineering Corp. 63
Linotype Parts Co. 67-70
Ludlow Typograph Co. 7
Matrix Contrast Corp. 22
Mergenthaler Linotype Co. 45
Miller Printing Machinery Co. 3
Minnesota Mining & Mfg. Co. 13
Mohr Lino Saw Co. 75
Monomelt Co. 9
Morrison, The, Co. 71
Nolan Corp. 75
Offen, B., & Co. 75
Ohio Knife Co. 68
Platemakers Equipment Co. 73
Printing Machinery Div.
Electric Boat Co. 49
Rapid Roller Co. 75
Reid, William, Co. 73
Richards, J. A., Co. 75
Rouse, H. B., & Co. 64
Royle, John, & Son 72
SKF Industries 11
Sta-Hi Corp. 1
Star Cement Co. 75
Staude, E. G.,
Div. Sperry Corp. ..... Insert between 16-17
Streamline Metal Feeder Co. 70
Surface Combustion Co. 74
Syntron Co. 66
Teletypesetter Corp. 56
Timken Roller Bearing Co. 51
Tingue, Brown & Co. 6
Vandercook & Sons, Inc. 57
Vulcan Proofing Co. 59
Wetter Numbering Machine Co. 60
Wise, William J. 72
Wood Flong Corp. 71
Wood Newspaper Machinery Corp. 16

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The Miracle Ink

Now Ready in BLACK and Colors—

This sheet printed with SNAP-SET HALFTONE BLACK E-4407 SNAP-SET ORANGE E-6105

Howard Flint Ink Company

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DETROIT CHICAGO HOUSTON DENVER ATLANTA
NEW ORLEANS CLEVELAND INDIANAPOLIS LOS ANGELES

Flint Inks

Delicate or **DOMINANT**

INTERTYPE faces can express every mood of the writer...every whim...every caprice. The advertiser's product and purpose, too, can be interpreted in a wide range of type subtleties. The jewel-like splendor of Egmont...the sturdiness of Beton...the perfectly proportioned Futura...the rhythmic tone of Medieval... the dignity of Weiss...the precision of Waverley—these and many other INTERTYPE faces are available to the imaginative typographer. Ask PROGRESSIVE INTERTYPE for showings of type faces for advertising composition, book manufacture, newspaper production and commercial printing.

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